OPERATING PROCEDURES, PUBLICATIONS AND OTHER DOCUMENTATION OF THE OHIO STATE YEAR END FARM BUSINESS ANALYSIS PROGRAM

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FOREWORD

This presentation is a compilation of present operating procedures, publications of the past year, and other documentation associated with the present operational status of the Ohio State Year End Farm Business Analysis Program. It is designed to acquaint the reader with the totality of the system. It is also designed to provide continuity in case of personnel changes. The only documentation lacking is the computer programs. The computer programs are very bulky and are maintained at the Public Services Computer Center.

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STANDARD OPERATING PROCEDURES

FOR THE

OHIO FARM BUSINESS ANALYSIS PROGRAM

The Ohio Farm Business Analysis Program is designed to evaluate farm business records of individual Ohio farmers. With the aid of a computer, income, expense, labor and investment items are analyzed for the overall farm and each farm enterprise. Persons submitting records for analysis are charged $15. The program is implemented by the Department of Agriculture Economics primarily through county agriculture agents, Vocational agriculture teachers, farm management area agents, and a few other area extension specialists. 462 farm records for the 1971 year and 26 farm records for the 1970 year were analyzed in 1972. Appendix A contains a listing of records by county and area.

Records analyzed for vocational agriculture teachers are directed through the Agriculture Education Department at Ohio State. Payment is made to the Agricultural Economics Department at the end of the processing season. Records are normally returned by mail to agents or by hand to the Agriculture Education Department within two to three weeks of receipt by the Agricultural Economics Department.

After completion of the processing season, individual records are summarized into state summaries and in a few cases, area summaries. Five summary publications including dairy, dairy by herd size, swine, general crop, and beef were printed for general distribution for the 1971 year. Types of summaries completed and numbers printed are listed in Appendix B.

Actual processing is done in a standard manner. Farmers enter their records on a printed data collection form (form 7363) with the aid of their county agent, vocational agriculture teacher, or farm management area agent. The agent or teacher sends these forms along with payment to "The Ohio State University" for processing. At the Agricultural Economics Department, farm numbers and payments are recorded. Data from the collection forms are punched onto computer cards by the Agricultural Economics Statistics Laboratory and are processed by computer in the University Hospital Computer Center at Starling-Loving Hall. One copy of the four-copy printout is retained at the Agricultural Economics Office, one is sent to the farmer, one is retained by the farm management area agent or state Agricultural Education Office, and one is retained by the county agent or vocational agriculture teacher.

Most of the editing, distribution, and delivery of the records is done by a work study student (currently Bill Short). The procedure followed is listed below in detail.

STANDARD PROCEDURES FOR HANDLING FARM BUSINESS ANALYSIS RECORDS

1. Receive 7363 forms by mail or personal delivery. Agriculture Education forms are usually delivered by John Starling, the faculty member in charge of the Agriculture Education portion of the record analysis program. See Appendix C for copy of 7363 form.

2. Check form for completeness and accompanying payment. Prepare form for punching using a step by step editing process (Appendix D). Two people should edit each record, or if only one person,

two edits should be made with a day between edits. Farms keeping records in the ARC program are not charged. It is presently contemplated that ARC record keepers will be charged starting in 1974. See Warren Lee for a list of ARC record keepers. Extension farm numbers start with 001, Agriculture Education with 70[illegible] and records not numbered with 000. No two records may have the same county and farm number. This confuses the computer.

3. Record farm number (normally assigned in the agent or Vocational Agriculture office), farmer name, amount of payment, and date received in office record book. See Appendix E for form used. If complete, take 7363 form to Stat Lab for punching and verifying. Stat Lab supervisor records farm number in Stat Lab record book. Two books (one in Ag. Econ. office and one in Stat Lab) are used to provide back-up in case of mistakes. The two book system is well worth the extra effort.

   If more information is needed on the input form, return the form to the agent or Ag. Ed. office (John Starling) with appropriate explanation. Log date returned in office record book. When returned with necessary information, treat record same as other records.

   Turn in payments to Marilyn Chute, Room 104, daily so as not to keep checks unsecured overnight. Payments for incomplete forms are turned in the day received. (We assume these forms will be returned promptly for analysis.)

   Keep separate account of Extension and Ag. Ed. records. Ag. Ed. office is presented with a bill at the end of the processing period. Marilyn Chute presents the bill, but we prepare it. Go over prospective bill with Ag. Ed. supervisor prior to giving bill to Marilyn.

   Record separately the farm number of records to be omitted from the state summary with reason for omission.

4. The Ag. Econ. Stat Lab punches data from the 7363 forms onto computer cards and verifies these cards. Punching and verifying should be done by different key punch operators. Date of punching is recorded in the Stat Lab record book. Time required for punching is recorded by the Stat Lab supervisor (Mrs. Howard). Cards are sorted by county number, farm number, and card number. An extra set of cards is made and retained in the Stat Lab for insurance of having data for summaries.

Current documentation of card format is kept on hand in the Stat Lab along with transparencies used as guides for punching. See Appendix F for documentation, transparency master copy, and Punch process.

At the beginning of each processing season, the first part of January, explain the complete punching, verifying, and recording procedure to the Stat Lab supervisor and key punch operators assigned to the Record Analysis Program. Check the records analyzed during the first several weeks closely to be sure punching (and computer program) is proceeding as desired.

5. Punched cards are delivered to the Hospital Computer Center (Ron Childers) in Starling-Loving Hall for processing from one to three times each week. Frequency of processing is increased when records submitted increase to facilitate handling. Output is run on plain white four part paper. Output is decollated (separated into four parts with carbon paper removed) by hospital computer center personnel. The decollating process sometimes delays processing by a day. If output is needed immediately, decollating can be done by Ag. Econ. personnel. Additional copies may be attained by having hospital computer center copy a carbon (carbons duplicate much better than originals) on their special duplicating machine. A few copies can be run on hospital computer center machine. Many copies should be duplicated from a reduced copy from computer center in Stat Lab.

   Processing should be complete within one or two days of delivery to the computer center. We pick up output from Ron Childers. Cards are retained at the computer center for processing summaries. Park behind Starling-Loving Hall and have a delivery permit (from Ag. Econ. front office). $10 fines are issued.

6. Look over output briefly. One farm record in each run should be examined in more detail to check for errors in the computer program, punching, etc. Check output with 7363 form to be sure no errors were made. See Appendix C for a copy of the printout as received by the farmer.

   Items to check:

   1. A few income and expense items
   2. Labor pages 4 & 5 - compare standard with individual to check for omissions.
   3. Acres of each crop
   4. Profit and return per hour for each enterprise

Simple corrections can be made by writing on output (all 4 copies). More complicated corrections should be made by repunching cards and resubmitting to computer. If recomputed, throw all 4 copies with errors away.

7. File one copy of the output. The original copy is stapled into a cover and placed in an envelope. This goes to the farmer via the office that sent it in. A copy of the explanation of the printout is also placed in the envelope. Only the farm number is placed on the envelope. Secretaries help with stapling, stuffing envelopes and mailing. Send the two remaining copies and the envelope to the area agent or to the county agent if no area agent was involved. If Ag. Ed., deliver both copies and envelope to John Starling. (John keeps one and sends the other and envelope to the Vo. Ag. teacher). Office copies need not be separated farm by farm (i.e., send all records from one agent or teacher in a continuous sheet of paper). Mark copies so that the area agent will be able to distribute them properly. Send envelopes and both copies in one package. A limit of 4 pounds is placed on penalty mail. Use meter mail for packages weighing over 4 pounds. Send information to Wooster Area Extension Center by shuttle bus.

   Record in office record book the date printout was mailed or delivered. Check book on occasion to be sure no record has been lost or forgotten.

8. Periodically, during processing, send letters to agents explaining a few details about the analysis and encouraging them to send in records for analysis.

9. Near end of processing period, have hospital computer center print a set of cards from each record already processed. See Appendix G for format of cards. These cards are used for preliminary summary information. Use one of the Statistical packages such as SPSS to analyze cards. This also gives a check on the program used by the hospital center.

After completion of the processing season, state, and in a few cases, area summaries are made from records processed. Field personnel will want summaries immediately. Prepare preliminary summary information for their use and speed final summary process as quickly as reasonably possible. Procedures for summary process follows.

1. Go through all records to check for incomplete or illogical output and omit these from summary. Have area and county

agents and Agriculture teachers do the same and notify Ag. Econ. office of farm records or enterprises to be omitted from summaries.

2. Have meeting with state farm management staff around end of processing period to decide when summaries are needed and format to be used for summaries. Be able to give numbers of records available for various types of summaries, and requests for special summaries. See Appendix H for 1971 experience. Run summary of all records submitted which were not excluded from State summary. Use this to attain number of various enterprise observations available for separate summary.

3. Prepare in writing an exact list of summaries to be run by the computer center. Give a copy to Ron Childers and retain several copies.

4. Prepare a list of calculations on a summary printout for the Stat Lab. Many of the unit calculations must be completed by Ag. Econ. Stat Lab personnel. (Stat Lab has copy of this printout).

5. Upon receiving summary printout material from the computer center, check printout for errors. Take to Stat Lab for calculations. After Stat Lab has completed necessary calculations, check for errors and ready for typing.

6. Have summary typed in proper format. After typing check summary <u>in detail</u> for errors. This means checking every calculation possible. See Appendix H for 1971 summaries.

7. Write up an explanation of findings from the summary calculations and include with summary information. Send preliminary copies of the summary pamphlet to selected state and area farm management staff for critique. Rewrite summary publication and have typed for duplication.

8. Send copies of summary publications to county agents, area agents, area supervisors, the State Ag. Ed. office which distributes among teachers, Agriculture College Department Chairmen, College of Agriculture Deans and publicity department, farm management staff at OSU and USDA, and other persons requesting summaries.

TIMETABLE

The Farm Business Analysis program normally operates on a regular timetable. However, this regularity has been disrupted in the last few years as a result of changing to computerized processing. The timetable for the 1973 processing year should serve as a basis for future years.

GENERAL: Every month run a record through the analysis program to check the operation of the program. Likewise, submit a summary to be run every month or two for similar reasons.

Time Schedule for Processing Records of the 1972 Year

Sept. 22 Meeting of state and area farm management staff to decide on changes to farm record analysis program for following year. Send letter to participants listing changes for following year. Appendix I,6.

Sept. 25 Submit information pamphlet and data collection form (form 7363) for publication at OSU print shop. Howard Frisbee of the Cooperative Extension publications office, Room 18, Agricultural Administration Building takes the order. See Appendix B for numbers printed. Pamphlets will be needed by Mid-October. 7363 forms will be needed by November 1.

Oct. 1 Update instructions for completing 7363 form. Print copies for county and area agents and vocational teachers. 800 copies needed by November 1.

Nov. 1 Update explanation of computer printout. 100 copies needed by December 10. 800 to 1,000 copies needed in total. (One copy is sent with each individual analysis.)

Order covers and any other printed material for computer printout of individual analysis.

If changes are to be made to the computer program, deliver a written copy of exact changes to be made to the program, complete with examples. Allow at least 6 weeks for minor

changes in the computer program. Printouts from changed program should be checked carefully. A comparison of several dozen farm records run on both the new program and the old program is very helpful in locating errors, and may be used to test the new summary program.

Nov. 15 — Send copies of information pamphlet, data collection form, instructions for completing the 7303 form, and any other pertinent information to area agents.

Dec. 26 — Send copies of all pertinent materials to county agents.

Jan. 2 — Meeting of area and state farm management staff. Report on farm business analysis program for previous and coming year.

Jan. 6 — Explain operating procedures for coming year to Stat Lab. Update card format documentation and transparencies used in punching.

The first input forms for analysis program begin coming in. Get prepared for heavy operation at this time. i.e., prepare processing record books, be sure covers, envelopes, and guides to the printout are available, etc.

Jan. 20 — Send letter to county agents concerning farm business analysis program.

Jan. 30 — First meeting requiring printout of records analyzed. This date varies somewhat from year to year.

Feb. 15 — Send letter to county agents, supervisors, etc. concerning some detail of the farm business analysis program and encourage them to send in records for analysis.

March 1 — Run test on summary to be sure it is operational. Check the summary carefully.

Send letter to agents reminding them of cut-off date, progress of program, etc.

March 15 to April 1 — Run first summaries. Prepare summaries for distribution. Send out preliminary summaries to farm management area agents, Agricultural Education Department, and others requesting summaries as soon as possible.

Apr. 1 Alert duplicating department (Dr. McCormick and operators) of needs through next few months. Describe summary calculation procedure to Stat Lab supervisor.

Apr. 15 Meeting of state and area farm management staff. Discuss progress of program. Have group decide on needs for following year.

HOSPITAL COMPUTER CENTER PROGRAMMING

Any computer programming done by the hospital computer center is likely to take many more computer hours and man hours than initially estimated, either by Agricultural Economics personnel or by hospital computer center personnel. The hospital computer center has never met a deadline which they have set for us. In both of the larger programming tasks done for Agricultural Economics during late 1971 and 1972, deadlines were missed by several months.

An example of programming changes made for the farm business analysis computer program for 1973 may be helpful in understanding some of the problems. In September, 1972, a joint meeting was held with state and area farm management staff, and hospital computer center personnel (Ron Childers and Joe Smith). Decisions concerning several changes to the farm business analysis program were made at this time. Ron Childers was consulted so that little programming and computer time would be needed to make the changes. According to Ron, the changes were easy to make and were to be completed within two or three weeks after programming was started. A written list of changes was delivered to Ron Childers on December 8. Because of higher priority programming commitments of the computer center, vacations and holidays, actual

programming was delayed to a large extent until after January 1. Misunderstanding of requested changes brought about at least one error requiring further programming. Changes in the computer systems of the hospital center (unrelated to requested changes) brought about delays of two or three weeks. A preliminary deadline of January 24 and a final deadline of January 29 was set by Bill Bastian and agreed upon by Ron Childers to have complete and accurate printouts available of actual farm records analyzed by the updated program. Such printouts were not available until February 11. A February 1 deadline was met by converting over 30 records to run on the 1971 program.

SUGGESTIONS:

Some of the problem in working with the Hospital Computer Center has been inadequate communications. We do not make complete enough explanation of what we want and the computer center does not ask questions to clarify ambiguities. In drawing up written programming needs, a complete list of changes must be provided. In addition, exact examples of input, output, and calculations need to be provided. Every calculation, every input entry, and every output statement must be explained in detail and accompanied with an example or examples.

Some of the problem results from errors made by the programmer in interpreting the written explanation, and from programming errors. Encourage the programmer to ask questions. Check printouts of new programs in great detail. This checking process should be done by at least two people. Try to anticipate problems. Carefully explain what is needed to correct errors in the printout.

Additional problems result from systems changes in the computer system unknown to the programmer. These changes may cause considerable delay and numerous wasted "runs" in program development. Little can be done at this level to help correct this situation. Plan additional time to complete programming because of these delays.

REASONS FOR DELAY OF SUMMARIES IN 1972 YEAR

Summaries could not be run until the computer summary program was operational. This was to be completed by April 1, 1972. The first acceptable summary was not completed until August 20, 1972. All programming corrections for the summary program were not completed until early October.

Delays in typing brought about by limited secretarial assistance delayed swine, beef, and crop summaries approximately 1 month.

Four of the five summaries were ready for duplication by November 15. Delays in duplicating resulted in short supplies of two of these summaries (primarily for extension meetings) until February 1.

APPENDIX A

7363 Numbers Processed In 1972

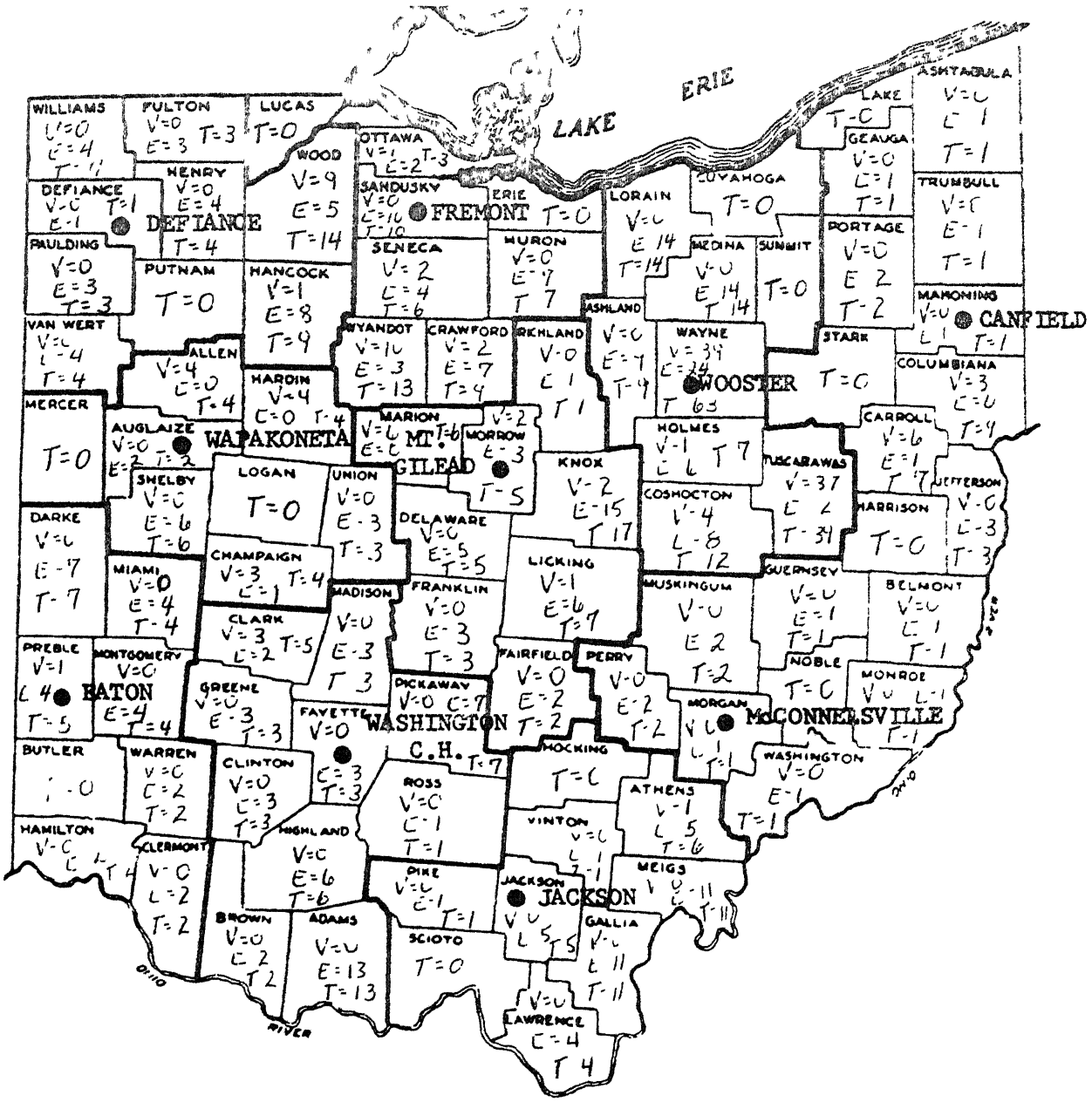
Date	Approx. Nos. Mailed Out
February 1	42
February 12-29	100
March 1-15	100
March 16-31	90
April 1-15	100
April 16-30	30
May	26
July	2

APPENDIX A

7363 FORMS RECEIVED FOR 1971 RECORD YEAR

Total for the State:

Vocational Agriculture	142
Extension Service	320
Total	462



V = Number of 7363 forms received through Vocational Agriculture

E = Number of 7363 forms received through Extension Service

T = Total number of 7363 forms received

7363 Forms Received By Area

	Areas	Extension	Vo. Ag.	Total
1.	Defiance	32	10	42
2.	Fremont	33	15	48
3.	Wapakoneta	12	11	23
4.	Mt. Gilead	35	11	46
5.	Eaton	25	1	26
6.	Washington C. H.	43	3	46
7.	Wooster	77	31	158
8.	Canfield	13	9	22
9.	McConnelsville	12	0	12
10.	Jackson	38	1	39
	Total	320	142	462

APPENDIX B

Printing Requirements for Farm Business Analysis Program 1972 and 1973

Item	Pages Printed	Printing Location	No. in 1972	No. in 1973
1 page pamphlet	2	Print Shop	7,500	10,000
Input form (7363)	6	Print Shop	7,500	8,500
Instructions for completing Input Form	15[1]	Stat Lab	500*	800*
Interpretation of computer printout	28	Stat Lab	1,100	800*
Sample printout, blank	16	Stat Lab	150*	0
Sample farm	13	Stat Lab	500*	100*
Test farm	43	Stat Lab	50*	50*
Printout cover	1	Print Shop	0	2,000

Summaries of 1971 Year

Summaries	Pages in Summary	Location	Number Printed 1972
Dairy	21	Stat Lab	6,000
Swine	19	Stat Lab	3,500
General Crop	38	Stat Lab	3,700
Beef	21	Stat Lab	2,000
Dairy By Herd Size	15	Stat Lab	2,000

Summaries for Limited Distribution

Part-owner, part-tenant General Crop	5		30
Sheep Enterprise	2		20

[1] 21 pages in 1973
* estimated

APPENDIX C

1. Explanatory pamphlet for Farm Record Analysis Program.
2. Data Collection Form (Form 7363).
3. Instruction kit for Completing the Data Collection form.
4. Copy of analysis printout as received by farmer.
5. Guide to Interpretation of Computer Printout.

QUESTION: Why analyze your farm?

ANSWER: To help you make wiser decisions and greater profits!

NOTE: Wise decisions are based on *good* and *timely information.* Your Ohio Farm Business Analysis can provide this information.

PURPOSE: The Ohio Farm Business Analysis is designed to evaluate your farm business. Your farm will be analyzed on the basis of resources available and receipts and expenses incurred in using these resources. Efficiency factors will be computed and will indicate the relative strengths and weaknesses in your business.

In addition, state and area summaries will be provided to allow you to compare your operation with other similar operations. After two or more years' analyses have been made on your farm you will be able to compare these years to determine if you are correcting weak points in the business and, in general, moving in the right direction.

You can take the information requested on the input form (7363) from your cash receipt and expense records, from your inventory and depreciation schedule, and from your crop and livestock enterprise records. These items are standard in most accounting systems; therefore, it is not absolutely necessary that you use the Ohio Commercial Farm Account Book to complete the 7363 Form.

PROGRAM: The program in farm management of The Ohio State University provides specialized educational assistance in all phases of Farm Business Organization and Management. The foundation of this program is a Farm Account and Business Analysis Project carried out in cooperation with The Ohio State University and farm operators from all over Ohio.

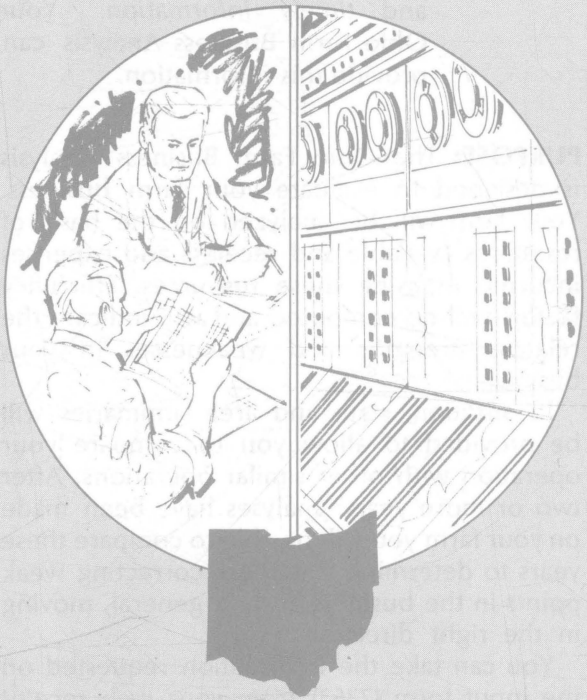
Complete farm records are analyzed under the supervision of Extension farm management specialists by use of an electronic computer. If your records are complete, including beginning and closing inventories, and you are interested in having an analysis of your last year's records, take them to your county Extension agent, area farm management agent, or vocational agriculture teacher by March 15. Your farm will be given a county number and a special farm number at the local office. This means that the identification of your farm can be known only by you, your county agent, area agent, or your vocational agriculture teacher, if you so desire.

A summary is made of all records turned in each year by enterprise groups. This summary is analyzed to provide current information on the changing economics of the farming business. It provides an organized method of evaluating new technological developments for the benefit of all farmers of the area. In brief, it's aimed at answering WHAT'S NEW? IS IT SUCCESSFUL? DOES IT PAY? DOES IT FIT ON MY FARM?

COST: There will be a nominal $15 charge to have your farm analyzed on the Ohio Farm Analysis System. This includes an analysis of your total farm business plus an analysis of one or more farm enterprises. As many as twenty enterprises can be analyzed as long as you can allocate your costs between the various enterprises.

Your check for $15 made out to The Ohio State University should be attached to your 7363 Form at the time it is submitted for University processing. Your farm analysis will not be processed until the proper fee is received.

OHIO FARM BUSINESS ANALYSIS



COOPERATIVE EXTENSION SERVICE
THE OHIO STATE UNIVERSITY

LET US HELP YOU MAKE YOUR FARM BUSINESS MORE SUCCESSFUL.

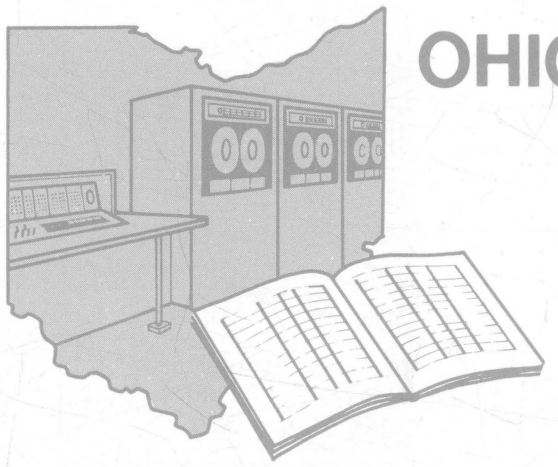
FOR MORE INFORMATION: *If you would like more information about the Farm Business Analysis Program or would like help on business management problems, contact your county Extension agent, area Extension agent in farm management or the vocational agriculture teacher in the area in which your farm is located.*

Department of Agricultural Economics and Rural Sociology

10/72—10M

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Roy M. Kottman, Director of Cooperative Extension Service, The Ohio State University.

Revised October 1972.



OHIO FARM BUSINESS ANALYSIS

DEPARTMENT OF AGRICULTURAL ECONOMICS
AND RURAL SOCIOLOGY

COOPERATIVE EXTENSION SERVICE / THE OHIO STATE UNIVERSITY

INSTRUCTIONS FOR COMPLETING THE FARM BUSINESS ANALYSIS DATA COLLECTION FORM

I. INTRODUCTION

The Ohio Farm Business Analysis is designed to evaluate your farm business. Your farm is analyzed on the basis of the resources available and the receipts and expenses incurred in using these resources. Efficiency factors are computed, which serve as indicators of the relative strengths and weaknesses in the business.

In addition, state summaries are provided to allow you to compare your operation with other similar operations. After two or more years' analyses have been made, you can make comparisons between years on your farm in order to determine if you are correcting weak points in the business and, in general, moving in the right direction.

The information requested on the 7363 Form is taken from your cash receipt and expense records, from your inventory and depreciation schedule, and from your crop and livestock enterprise records. These items are standard in most accounting systems, and it is not absolutely necessary that you use the Ohio Commercial Farm Account Book to complete the 7363 Form.

II. GENERAL INSTRUCTIONS

A. Business To Be Included—The analysis is for the operator's business, and includes receipts, expenses, and inventories as incurred by the operator. Tenants should not include receipts, expenses, and inventories for landlords—and vice-versa.

B. Do Not Use *Dark* Shaded Areas!

C. Nearest Whole Number—Round all figures to the nearest dollar, acre, bushel, ton, month, etc. unless a decimal point is provided to indicate otherwise.

D. Do Not Cross Out a Line or Write in Items—Each line as printed must remain. If you scratch out a line and write in some other identification, the figures you enter will be treated as though they were for the wording as printed.

III. CASH RECEIPTS (Page 1—Column 1)

Enter the net amount received after marketing expenses (hauling, association fees, commission charges, etc.) have been deducted in reporting receipts. Since marketing expenses are not reported in the expense section, gross receipts are not recorded here.

A. General Crops—Insurance or disaster payments for crops should be included here because this is money received instead of what would have been received for the crop. The same is true for livestock.

B. Special Crops—Enter the net amount of the checks received.

C. Labor Off-Farm—This should include only occasional labor, and as a general rule it should not include labor for which a W-2 form is received.

D. Government Crop Payment—Crop payments that are recorded as government payments in the record book are sorted out and entered here. This would include diverted acreage and subsidy payments.

E. Market Livestock Receipts—Includes only market livestock sold. Breeding livestock sales should be reported in the Capital Gains Section.

IV. CASH EXPENSES (Page 1—Column 2)

A. Hired Labor—Payments to members of the family for labor should be included as hired labor. Exception: Corporation farms (see VI A.).

B. Feeder Livestock Purchased—This should include only purchases made during the record year and excludes animals transferred from the beef breeding and dairy herds. Note that this account is treated differently than for cash basis tax accounting.

V. CAPITAL GAINS (Page 1—Column 3)

Report *sale* of breeding livestock here. Do not include in Cash Receipts. For purchased animals, enter only the amount of the gain or loss and not the total selling price. For raised breeding livestock, enter the total amount of the sale. Enter only information for livestock, and machinery actually sold.

VI. LABOR (Page 1—Column 3)

A. Operator's Labor Used—Enter here the number of hours of operator's labor used. If two operators are in partnership, list separately on the two lines provided. An operator normally works 250 hours a month or 3000 hours a year. More hours are often worked in the summer but this is normally balanced off by the winter. The value per hour of operator's labor represents what he could earn for performing similar work in the community. This *must* be specified. DO NOT include in this labor charge a value for management. If hired labor includes operator's labor, as in corporations, deduct the amount paid each operator from the hired labor expense and enter the number of man-equivalent hours, and value per hour under this section.

B. Unpaid Family and Hired Labor USED—Calculate the hours of other unpaid family labor used. A value per hour for each *must* be assigned. If the family labor is actually paid, enter the number of man equivalent hours worked on the hired labor line rather than under "Unpaid Family Labor," and enter the total wages paid as a labor expense under "Cash Expenses." Labor by wives and family members are made equivalent to operator labor by multiplying hours of wife and family labor over 14 by eight-tenths and family labor hours under 14 by one-half.

C. Labor Efficiency Factor—A labor efficiency factor will be computed for your farm using your labor figures. The efficiency factor is determined by dividing the number of hours actually used on your farm into the number that would have been used if labor efficiency were average for the state. This labor efficiency factor will be used to adjust standard labor figures for your crop and livestock enterprises where you do not provide your own labor figures.

VII. CROP PRODUCTION (Page 2—Columns 1-10)

A. Code (Column 1)—Write in codes for any crops on lines E, F, I, M, P, Q, R. The following codes are available:

Barley	05	Grapes	28
Grain Sorghum	06	Sweet Corn	29
Other Grain	09	Tobacco	30
Dehydrated		Sugar Beets	31
Alfalfa	12	Tomatoes	32
Green Chop	17	Pickles	33
Other Hay	18	Popcorn	34
Haylage	19	Apples	35
Direct Cut		Peaches	36
Grass Silage	20	Strawberries	37
Other Silage	22	Other Fruit	38
Seed Corn	23	Other Vegetables	39
Seed Soybeans	24	Other Special	
Seed Wheat	25	Crops	45
Cabbage	26	Other Crops	46-50
Potatoes	27	(List type)	

B. Value Per Unit (Column 2)—Individual farm values *must* be provided for grain, hay, silage, special crops, and pasture (enter pasture values at bottom of Column 9).

1. *Green chop, silage, haylage*—As a rule of thumb, if the price of a ton of good alfalfa hay from a field is $25 per ton, the value of green chop 18% dry matter would be $5 per ton, direct cut silage 22% dry matter would be $6.25 per ton, wilted grass silage 30% dry matter would be $8.25 per ton, haylage 45% dry matter $12.50 per ton, and haylage 60% dry matter $16.50 per ton.
2. *Corn Silage*—The value of corn silage would vary between $8 and $11 per ton for normal corn silage harvested at 30%-36% dry matter and between $12 and $16 per ton harvested at 40%-45% dry matter.
3. *Pasture*—Per-acre charges for pasture would vary from $18 for excellent, $14 for good, $10 for fair, to $6 for poor for dairy. Beef would usually be on poorer land. Permanent pasture would usually rank lower than rotation pasture with excellent permanent pasture worth around $12 per acre. Since all of the available pasture may not be pastured, the value per acre assigned should be the average value of the acreage actually pastured.

   In addition to the regular rotation pasture, some hay acreage may be pastured over the winter after 1 or 2 cuttings of hay. Therefore, the value per acre assigned should include this pasture.

C. Labor Per Acre (Column 3)—Filling in this column is OPTIONAL. Adjusted standard labor requirements per unit (i.e., hours per acre) will be used unless values are entered here. If actual time, or reasonably accurate estimates, are *not* known, leave this column blank. The labor required per unit includes both direct and indirect labor used. If only direct labor requirements are known, add approximately 25% for indirect labor. IF HOURS ARE ENTERED IN THIS COLUMN FOR ANY CROP GROWN, HOURS MUST BE ENTERED FOR *ALL* CROPS GROWN AND THE LABOR SECTION ON PAGE FOUR MUST BE COMPLETED FOR EACH TYPE OF LIVESTOCK ON THE FARM. Do not make incomplete use of this column.

Labor Standards Which Will Be Used:

Corn	5.0	Haylage	5.0
Soybeans	4.0	Rotation Pasture	2.0
Oats	2.0	Permanent Pasture	1.0
Wheat	4.0	Diverted Acres	2.0
Hay	9.0	Other Crops	10.0
Green Chop	5.0	(Code 46-50)	
Corn Silage	8.0		

These standards will be adjusted based on your labor efficiency factor.

D. Total Acres (Column 4)—Where two or more different crops are taken from the same field with no tillage operation between them, list the total production for each, but DO NOT count acreage twice. For two or more crops with a tillage operation between them, enter the actual acres of each crop harvested.

E. Fed On Farm (Column 10)—Enter here the total amounts of each crop fed. For lines A through M, this total is calculated by adding the operator's share of "Production and Beginning Inventory" less "Sales" and "Closing Inventory." For pasture rows N and O, the actual acres pastured are entered. For purchased feeds, the operator's share of the pounds and value of the supplement, grain, and roughages are entered.

VIII. CROPS FED TO LIVESTOCK (Page 2—Columns 11-16)

The total operator's share of each feed fed to livestock (shown in Column 10) is allocated to the enterprise that consumed it. The individual figures in Columns 11 through 16 on each line should total to the value on the same line shown in Column 10.

IX. ENTERPRISE EXPENSE DISTRIBUTION (Page 3)

In this section your expense items are broken down according to the enterprise on which you incurred the expense. Total cash expenses may be copied from page 1, column 2, and total depreciation from page 1, column 3. Total investment is obtained by adding beginning and closing inventory page 1, column 3 and dividing by 2. Cash expenses, depreciation and investment are reported in actual dollars for each enterprise. These figures must be reported for each enterprise for which you desire an analysis. Each livestock enterprise must be reported separately. Crops may be reported individually or as a group. If crops are to be handled as a group, use the enterprise code of 00.

X. LIVESTOCK ENTERPRISE ANALYSIS (Page 4)

A. A Section Must Be Completely Filled in Before Analysis Will Be Provided. If a particular value is zero, then enter a zero. A number or a zero must appear on *each line* of an enterprise section for which enterprise analysis is requested.

B. If Enterprise Analysis Is Requested on One Livestock Enterprise, It Must Be Requested on All. For example, if you have hogs and cattle but want detailed analysis on the hogs only, you *must* complete the necessary information for cattle also in order to get a detailed analysis on hogs.

C. Average Number of Cows in Dairy Herd—You can calculate this by adding the monthly number of cows on hand and dividing by 12. If a cow is sold before the 15th of the month, don't include her in the monthly total.

D. Number of Beef Cows Bred To Calves—This is the number of cows bred to calve *during* the year for which this report is filed.

E. Number of Ewes Exposed—This is the number of ewes bred to lamb *during* the year for which this report is filed.

F. Labor—Filling in this section is OPTIONAL. Adjusted Standard labor requirements per unit will be used unless actual hours are entered here. If actual hours, or reasonably accurate estimates, are not known, leave this section blank. The labor required per unit includes both direct and indirect labor used. If only direct labor requirements are known, add approximately 25% for indirect labor. If you make an entry in this section, entries for each type of livestock on the farm must be made as well as entries in Column 3, page 2, for each crop. Do not make incomplete use of this section.

Labor Standards Which Will Be Used:

Dairy Cow	60.0	Beef Feeder-Per	
Dairy Bull	20.0	1,000 lbs. gain	10.0
Replacement		Poultry-Per	
Heifer	15.0	1,000 Laying	
Litter-Farrowing		Hens	150.0
to Weaning	7.0	Turkeys-Per	
Market Hog—		1,000 lbs. Sold	4.3
Weaning to		Broilers-Per	
Market per		1,000 lbs. Sold	2.8
1,000 lbs. gain	7.2	Ewe and Lamb	
Boar	30.0	to Weaning	6.0
Beef Cow	12.0	Lambs-Per 100	
Beef Bull	20.0	lbs. Gain	4.0
Replacement			
Heifer	10.0		

These standards will be adjusted based on your labor efficiency factor.

FARM BUSINESS ANALYSIS

DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY
COOPERATIVE EXTENSION SERVICE

OHIO STATE UNIVERSITY

NAME and/or NUMBER ADDRESS COUNTY YEAR 19

THIS RECORD IS FOR

OWNERSHIP: (Check one) ☐ FULL OWNER ☐ PART-OWNER, PART-TENANT ☐ TENANT ONLY ☐ ABSENTEE OWNER ☐ TENANT AND LANDLORD

TYPE OF BUSINESS: (Check one) ☐ SOLE PROPRIETOR ☐ PARTNERSHIP ☐ CORPORATION ☐ OTHER (List)_____

	CASH RECEIPTS (To Nearest Dollar)		Col. 1
	KIND	COL. NO. pp. 52 & 53	AMOUNT
A	Milk and Cream	12	$
B	Poultry and Eggs	13	
C	General Crops	2-4	
D	Special Crops	2-4	
E	Cash Rent & Royalties	9	
F	Labor Off Farm	7	
G	Custom Work	6	
H	Wool & Wool Subsidies	14	
I	Other Livestock Prod.	14	
J	Tax Refund	8	
K	Patronage Dividend	8	
L	Breed. Fees Received	9	
M	Misc. Receipts	9	
N	Gov. Crop Payments	5	
O	Gov. Payments	5	
P	MARKET LIVESTOCK* — Swine	15	
Q	MARKET LIVESTOCK* — Fat Cattle & Calves	16	
R	BOTH RAISED AND PURCHASED — Veal Calves	18	
S	BOTH RAISED AND PURCHASED — Lambs	17	

	CASH EXPENSES (To Nearest Dollar)		Col. 2
	KIND	COL. NO. pp. 54 & 55	AMOUNT
	Hired Labor	2	$
	Feed Purchased	10	
	Farm Supplies	5 & 13	
	Machinery Repairs	8	
	Bldg., Fence, etc., Repairs	19	
	Fuel, Oil, Grease	6	
	Utilities (Farm Share)	17	
	Drying and Storage	7	
	Misc. Expenses	23	
	Seeds and Plants	3	
	Fertilizer and Lime	4	
	Mach. Hire and Trucking	9	
	Auto Expense (Farm Share)	18	
	Interest on Notes and Mort.	22	
	Veterinary and Medicine	14	
	Breeding Fees, Regs., and Milk Testing	15	
	Feeder Livestock Purchase**	16	
	Taxes	20	
	Rent (Cash)	20	
	Insurance	20	

INVESTMENT & INVENTORY (To Nearest Dollar)		Col. 3
KIND	Beginning	Closing
Purch. Breed. Livestock***	$	$
Raised Breed. Livestock		
Market Livestock		
Grain, Hay, Supplement		
Supplies and Fertilizer		
Machinery, Equipment		
Buildings, Fence, tile, etc.		
Land (Current Ag. Val.)****		
CAPITAL GAINS (Net Sale – Undepreciated Value)	Gain	Loss
Raised Breed. Livestock	$	
Purch. Breed. Livestock		
Machinery, Equipment		
DEPRECIATION	DEPRECIATION FOR YEAR	
Bldg., Fence, tile, etc.		$
Machinery, Equipment		
Purch. Breed. Livestock		

LABOR

Operator's Labor Used	Hours	Value Per Hour
Number of Operators	.	.
Number of Operators	.	.
Unpaid Family Labor USED Wife	.	.
Family Labor Over 14	.	.
Family Labor Under 14	.	.
Hired Labor	.	

For Office Use Only

Year ☐☐ County ☐☐ Farm ☐☐☐

Type of Farm ☐ Ownership ☐ Type of Business ☐☐ Years of Cooperation ☐☐

Form 7363—Rev. 10/72

* Enter only Market Livestock. Breeding Livestock is entered under Capital Gains.
** NOTE: For Feeder Livestock Purchases, include only purchases made during this record year.
*** Enter Appraised rather than depreciated value for Purchased Breeding Livestock.
**** What would similar land sell for this year? If some of this price is because of speculative or urban influences, list only Agricultural Value.

CHECK LIST

Please go over your entries with this check list to make sure you have filled out the form properly.

General—All figures should be to the nearest whole number unless a demical point is provided. All entries must be legible.

Page 1—Family and operator labor should be entered in hours for the year, not daily, monthly, etc. Enter only MARKET livestock sales in the cash receipts column. Breeding livestock sales are entered under Capital Gains.

Page 2—Check enterprise codes to be sure they are correct. Enter prices for each crop. For each crop, Column 6 plus Column 7 should equal Column 8 plus Column 9 plus Column 10, and Column 10 should equal the sum of Columns 11 through 16. Purchased feed should include only feed actually fed. If there is an entry in Column 3, each crop on your farm must have an entry in Column 3, and each type of livestock on your farm must have an entry under the labor section on page 4. Labor entries are to the nearest one-tenth of an hour.

Page 3—Check enterprise codes in the top row to be sure they are correct. Each enterprise on page 3 must have an entry on page 2 or 4.

Page 4—Percent of total must have an entry. Enter butterfat test to nearest hundredth of a percent and average number of cows to the nearest tenth of a percent. Enter weight figures where called for. An enterprise cannot be evaluated without weight figures.

Year County Farm
□□-□□-□□□

CROP PRODUCTION

CROPS FED TO LIVESTOCK

		TOTAL FARM					OPERATOR'S SHARE						OPERATOR'S SHARE					
		1* CODE	2 VALUE/ UNIT	3** LABOR/ ACRE (HRS.)	4 TOTAL ACRES	5 TOTAL PROD.	6 SHARE OF PROD.	7 BEGINNING INVENTORY	8 SALES	9 CLOSING INVENTORY	10 FED ON FARM		11 (51) DAIRY	12 (52) HOGS	13 (53) FEEDER CATTLE	14 (54) BEEF COWS	15 (55) (57) SHEEP	16 (56) POULTRY
A	Corn	01	.	.		Bu	Bu	Bu	Bu	Bu	Bu		Bu	Bu	Bu	Bu	Bu	Bu
B	Soybeans	02	.	.		Bu	Bu	Bu	Bu	Bu	Bu		Bu	Bu	Bu	Bu	Bu	Bu
C	Oats	03	.	.		Bu	Bu	Bu	Bu	Bu	Bu		Bu	Bu	Bu	Bu	Bu	Bu
D	Wheat	04	.	.		Bu	Bu	Bu	Bu	Bu	Bu		Bu	Bu	Bu	Bu	Bu	Bu
E	Other Grain		.	.		Bu	Bu	Bu	Bu	Bu	Bu		Bu	Bu	Bu	Bu	Bu	Bu
F	Other Grain		.	.		Bu	Bu	Bu	Bu	Bu	Bu		Bu	Bu	Bu	Bu	Bu	Bu
G	Alfalfa Hay	10	.	.		T	T	T	T	T	T		T	T	T	T	T	T
H	Clover, Mixed Hay	11	.	.		T	T	T	T	T	T		T	T	T	T	T	T
I	Other Hay		.	.		T	T	T	T	T	T		T	T	T	T	T	T
J	Other General Crop	46	.	.	.	T	T	T	T	T	T		T	T	T	T	T	T
K	Haylage	19	.	.		T	T	T	T	T	T		T	T	T	T	T	T
L	Corn Silage	21	.	.		T	T	T	T	T	T		T	T	T	T	T	T
M	Other General Crop		.	.	.	T	T	T	T	T	T		T	T	T	T	T	T
N	Rotation Pasture	40		.			Rotation Pasture USED Value Per Acre $.				Ac		Ac	Ac	Ac	Ac	Ac	Ac
O	Perm. Pasture	42		.			Permanent Pasture USED Value Per Acre $.				Ac		Ac	Ac	Ac	Ac	Ac	Ac
P	Special Crop			.	.	$												
Q	Special Crop			.	.	$	Actual Pounds of Purchased Supplement Fed				Lbs		Lbs	Lbs	Lbs	Lbs	Lbs	Lbs
R	Special Crop			.	.	$	Actual Dollars of Purchased Supplement Fed (include grind plus mix plus minerals)				$		$	$	$	$	$	
S	Other Special Crop	45		.	.	$												
T	Diverted Acres	44		.			Actual Pounds of Purchased Grain Fed				Lbs		Lbs	Lbs	Lbs	Lbs	Lbs	Lbs
U	Woodland						Actual Dollars of Purchased Grain Fed				$		$	$	$	$	$	
V	Other Land																	
W	Total Acreage						Actual Pounds of All Purchased Roughages Fed				Lbs		Lbs	Lbs	Lbs	Lbs	Lbs	Lbs
X	Crop Acres Owned						Actual Dollars of All Purchased Roughages Fed				$		$	$	$	$	$	
Y	Crop Acres Rented						These are amounts actually fed and not amount purchased.											

*See attached directions to determine the appropriate code to use. Always complete the code column if a value is entered on Lines E, F, I, M, P, Q, R.

** This column is completed only if reasonably accurate estimates are available of actual labor requirements. If no values are entered, standard labor requirements will be used. If this column is completed, the labor section on page 4 must also be completed.

Year County Farm
☐☐-☐☐-☐☐☐

ENTERPRISE EXPENSE DISTRIBUTION

Make All Entries to Nearest Dollar.

	EXPENSE ITEM	Totals from p. 1	ENTERPRISE CODE*											
2	Hired Labor													
5, 13	Farm Supplies													
8	Machinery Repairs													
19	Bldg., Fence, etc., Repairs													
6	Fuel, Oil, Grease													
17	Utilities (Farm Share)													
7	Drying and Storage													
23	Miscellaneous Expense													
3	Seeds and Plants													
4	Fertilizer and Lime													
9	Machine Hire & Trucking													
18	Auto Expense (Farm Share)													
22	Interest on Notes & Mortgage													
14	Veterinary & Medicine													
15	Breed. Fees, Reg. & Milk. Test.													
16	Feeder Livestock Purchase													
20	Taxes													
20	Rent (Cash)													
20	Insurance													
	DEPRECIATION Bldg., Fence, Tile, etc.													
	Machinery Equipment													
	Purchase Breed. Livestock													
	INVESTMENT													

* CODES FOR ENTERPRISE ANALYSIS

CROPS

00 All Crops
01 Corn
02 Soybeans
03 Oats
04 Wheat
05 Barley
06 Grain Sorghum
09 Other Grain
10 Alfalfa Hay
11 Clover, Mixed Hay
12 Dehydrated Alfalfa
17 Green Chop
18 Other Hay
19 Haylage
20 Direct Cut Grass Silage
21 Corn Silage
22 Other Silage
23 Seed Corn
24 Seed Soybeans
25 Seed Wheat
26 Cabbage
27 Potatoes
28 Grapes
29 Sweet Corn
30 Tobacco
31 Sugar Beets
32 Tomatoes
33 Pickles
34 Popcorn
35 Apples
36 Peaches
37 Strawberries
38 Other Fruit
39 Other Vegetable
40 Rotation Pasture
42 Permanent Pasture
44 Diverted Acres
45 Other Special Crop

Other Crops (List)

46 _____
47 _____
48 _____
49 _____
50 _____

LIVESTOCK

51 Dairy
52 Swine
53 Feeder Cattle
54 Beef Cows
55 Sheep
56 Poultry
57 Other Livestock (make entry on page 4 under sheep section)

Individual analysis is possible for each type of livestock and crop. It is also possible to obtain an analysis for each type of livestock and a general analysis for all crops. If the crops are to be handled as one enterprise give them a code of **00.**
Total investment is obtained from the inventory listings on page 1. It is calculated by adding beginning and closing inventory and dividing by 2. In assigning investment values for each enterprise, include all factors. As an example, land, crop machinery, fertilizer, etc., should be assigned to crop enterprises.

LIVESTOCK ENTERPRISE ANALYSIS

Year County Farm
☐☐-☐☐-☐☐☐

Operator's Share of the Livestock Which The Figures Below Represent

Per Cent of Total_____%

SWINE Code 52

Begin. Inventory	Number	Total Wt.	Total Value
Sows			
Gilts			
Boars			
Shoats and/or Feeder Pigs			

Purchases	Number	Total Wt.	Total Value
Sows			
Boars			
Feeder Pigs			

Sales	Number	Total Wt.	Total Value
Sows			
Boars			
Market Hogs			
Feeder Pigs			

End. Inventory	Number	Total Wt.	Total Value
Sows			
Gilts			
Boars			
Shoats and/or Feeder Pigs			

Number of Litters farrowed _____
Number of Pigs Weaned _____

DAIRY Code 51

Begin. Inventory	Number	Total Value
Cows		
Bulls		
Heifers		
Calves		

Purchases	Number	Total Value
Cows		
Bulls		
Heifers		
Calves		

Sales or Transferred to Feeders	Number	Total Value
Cows		
Bulls		
Heifers		
Veal		

End. Inventory	Number	Total Value
Cows		
Bulls		
Heifers		
Calves		

Milk Sales	Total Pounds	
Average Butterfat Test		.
Average Number of Cows in the herd		.

BEEF BREEDING Code 54

Begin. Inventory	Number	Total Wt.	Total Value
Cows			
Bulls			
Heifers			
Calves			

Purchases	Number	Total Wt.	Total Value
Cows			
Bulls			
Heifers			

Sales or Transferred to Feeders	Number	Total Wt.	Total Value
Cows			
Bulls			
Heifers			
Calves			

End. Inventory	Number	Total Wt.	Total Value
Cows			
Bulls			
Heifers			
Calves			

Number of cows bred to calve _____
Number of calves saved _____

SHEEP Code 55 or OTHER LIVESTOCK Code 57

Begin. Inventory	Number	Total Wt.	Total Value
Ewes			
Rams			
Lambs			

Purchases	Number	Total Wt.	Total Value
Ewes			
Rams			
Lambs			

Sales	Number	Total Wt.	Total Value
Ewes			
Rams			
Lambs			

End. Inventory	Number	Total Wt.	Total Value
Ewes			
Rams			
Lambs			

Wool Sales	Pounds	
Number of ewes exposed		
Number of lambs born		

BEEF FEEDING Code 53

Begin. Inventory	Number	Total Wt.	Total Value
Purchased or Transferred (From Beef or Dairy Breeding Herd)			
Sales			
End Inventory			
Number Died			

POULTRY Code 56

Laying Hens	
Ave. No. for Year	No.
Eggs Sold	Doz.
Broilers, No. Sold	No.
Turkeys, No Sold	No.
Broilers, Lbs. Sold	Lbs.
Turkeys Lbs. Sold	Lbs.

LABOR*

Enterprise and Unit	Avg. Hrs. Per Yr. Per Unit
Dairy Cow	.
Replacement Heifer—Dairy	.
Litter Farrowed—to weaning	.
Mkt. Hog—Weaning to Market—Per 1,000 lbs. gain	.
Boar	.
Beef Cow	.
Beef Bull	.
Replacement Heifer—Beef	.
Beef Feeder—Per 1,000 lbs. gain	.
Poultry—Per 1,000 Laying birds	.
Ewes and Lamb—to weaning	.
Lambs—Per 100 lbs. gain	.
Dairy Bull	.
Turkeys—Per 1,000 lbs. sold	.
Broilers—Per 1,000 lbs. sold	.

* This section is only completed if reasonably accurate estimates of actual labor requirements are available. If no values are entered, standard labor requirements will be used. If this section is completed, Column 3 on Page 2 must also be completed.

Instruction Ki. for
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Vocational Tea ers

Ec oni s and ociology
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Farm Business Analysis
Procedures and Instructions for Completing the Data ollect on Form 73

By

Jonn W. Bastian
Reed D. Taylor
Richard D. Duvi k
John E. Moore

November, 197

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FARM BUSINESS ANALYSIS SUMMARY

Procedures and Instructions for Completing the Data Collection Form
Revised November 1972

INTRODUCTION

The Ohio Farm Business Analysis is designed to evaluate farm businesses. Each farm is analyzed on the basis of the resources available and the receipts and expenses incurred in using these resources. Efficiency factors are computed which serve as indicators of the relative strengths and weaknesses in the business. In addition, state summaries are provided to allow the individual farmer to compare his operation with other similar operations. After a farmer has analyzed his farm for two or more years, he can make comparisons between years on his own farm in order to determine if he is correcting weak points in his business, and moving in the right direction.

Information for individual farm businesses is requested on the Green and Yellow data collection form (Form 7363, revised October, 1972). Please do not use the green and yellow form used in 1971. This information is taken from the operator's cash receipts and expense records, from his inventory records and depreciation schedule, and from his crop and livestock enterprise records. Directions in this pamphlet are for persons keeping records on the Ohio Commercial Farm Account Book. However, since information requested is standard in most accounting systems, any farm operator with good records should be able to complete the data collection form.

A. GENERAL INSTRUCTIONS

1. Business To Be Included--The analysis is for the operator's share of the business and includes receipts, expenses, inventories and investments as incurred by the operator. Tenants should not include receipts, expenses, inventories and investments for landlords and vice versa. Caution should be taken not to double count or leave out items that are in inventory. For example, livestock sold in the current period with payment received in the next period should be entered either as ending inventory or as cash receipts, but not both. A complete count of items in inventory is necessary to receive a good analysis. If inventory figures are not available for the beginning of the year, an operator can usually approximate these figures when he is taking his year end inventory.

2. For Office Use Only (County Agents, Area Agents, and Vocational Agriculture Teachers)

a. Farm Number--A farm number should be assigned by the County Agent or Area Farm Management Agent. Farm Business Summaries submitted through teachers of Vocational Agriculture will be assigned a number by the person editing the summaries in the Department of Agricultural Education. In order to avoid duplication, it is suggested that farms submitted through extension agents be numbered starting at "001" and farms submitted by vocational agriculture teachers be numbered starting at "700". There can be a farm number "001" in each county of the state but there cannot be two number "001's" in the same county. Be sure to enter the year, farm number, and county on each of the pages of the data collection form.

b. Farm Type--The farm type should be specified by the County Agent, Area Farm Management Agent, or teacher of Vocational Agriculture. As a general rule, this designation is determined by looking at the Cash Receipts. If over one-half of the Cash Receipts from crops and livestock are from hogs, it is a hog farm; if over one-half are from dairy, it is a dairy farm, etc. If over half of the Cash Receipts from crops and livestock are not from one enterprise, classify the farm as a general farm. For farms with over one-half of the Cash Receipts from cattle, look at the enterprise section to determine if the farm is a Beef Breeding farm or Beef Feeding farm.

Farm Type Codes

Farm Type	Code	Farm Type	Code
Dairy	1	Beef Breeding	6
Swine	2	Poultry	7
Beef Feeding	3	Sheep	8
General Crop	4	General Farm	9
Special Crop	5		

3. Type of Analysis - All farms will be analyzed with enterprise analysis this year. The total farm analysis without enterprise analysis which was available for 1971 has been discontinued. Please complete the data collection form for enterprise analysis. If sufficient information is not available, shaded areas may be left blank. Leaving shaded areas blank will cause incomplete enterprise analysis. All non-shaded areas must be completed to receive an analysis.

4. Do Not Use DARK SHADED Areas! - No information will be taken from these areas.

5. Nearest Whole Number - Round all figures to the nearest dollar, acre, bushel, ton, hour, etc. unless a decimal point is provided.

6. Do Not Cross Out a Line or Write In Items - Each line is interpreted as it was originally printed. If you scratch out a line and write in some other heading, the figures you enter will be treated as though they were for the wording as printed. For instructions on special use of the analysis, see pages 18 to 20.

B. IDENTIFICATION INFORMATION

1. Name-- The operator's name and/or the farm number should be entered here. Complete operator's address, county, year, farm and business type. For persons who wish, the name and address may be omitted. Be sure to notify the processing center of where to send these analyses.

2. Ownership Classification--The following general guidelines are suggested for determining the appropriate classification:

   a. Full Owner--In addition to the full owner who is in the crop or livestock business, this group should include the crop farmer who cash rents all of his unowned land. Also, farms with less than 15 percent of the acreage share rented would be classified as Full Owners.

   b. Part Owner - Part Tenant--The farmer who owns a farm and rents other acreages on a percentage share basis. Farmers who own more than 15 percent and share rent more than 15 percent of the acreage which they farm would be classified as Part Owner - Part Tenant.

   c. Tenant Only--The tenant shares in all returns from crop and livestock. Also included would be farmers owning livestock or some of the acreage which they farm, but the amount of acreage owned is less than 15 percent of the total acreage farmed.

   d. Tenant and Landlord--The total farm receipts and expenses are reported as one operation. This would include father-son partnerships. Also include operations in which a tenant farms from one owner and that owner rents only to the one tenant. The information from these operations is entered the same as Full Owner in (a) above.

3. Type of Business--Select the business classification under which the farm operated during the year being analyzed.

C. CASH RECEIPTS (Column 1)

Include all cash receipts received during the year (pages 52 and 53 of the Ohio Commercial Farm Account Book). Round all entries to the nearest whole dollar.

EXAMPLE:

$31.49 recorded as $31.00
$31.50 recorded as $32.00

Use the net amount received after marketing charges (hauling, association fees, commission charges, etc.) have been deducted in reporting receipts. Since marketing expenses are not reported in the expense section, gross receipts are not recorded here.

1. Milk and Cream (Column 1, Row A)--This entry should be the net amount (as shown on page 52 of the Ohio Commercial Farm Account Book). It is the gross receipts less marketing charges. It is important not to enter marketing expenses in the Cash Expense section.

2. General Crops (Column 1, Row C)--Enter receipts for grain, hay, silage, etc. Insurance or disaster payments for crops should be included here because this is money received in lieu of what would have been received for the crop. Other insurance payments aren't included on this form. Grain purchased for resale should not be recorded here when sold, nor should it be entered as an expense. Only the net difference when sold is recorded. If money was made on the transaction, enter the net profit as a general crop receipt. If a net loss resulted, enter it as miscellaneous expenses. DO NOT enter this grain as inventory, either ending or beginning. If on hand at the end of the year, ignore the transaction entirely on the data collection form. Only net return during the year of sale is recorded and this is the only record made of the transaction. Futures transactions for crops are handled in the same manner. Government crop payments received should be entered under the Government Crop Payments Account (Row N) rather than here.

3. Special Crops (Column 1, Row D)--Enter the net amount received for special crops such as fruits, vegetables, seed crops, tobacco, etc. For crops grown under contract, care must be taken not to double count or omit certain expenses. As a general rule, if a gross amount is received and production expenses paid out by the individual, enter the gross in Cash Receipts and the expenses under the appropriate cash expense account. On the other hand, if a net amount is received and entered in Cash Receipts, (i.e., certain or all production expenses have been deducted out) DO NOT enter in the Cash Expense section the expenses already deducted.

4. Labor Off Farm (Column 1, Row F)--This should include only occasional labor and, as a general rule, it should not include labor for which a W-2 Form is received.

EXAMPLES:

a) 10 days work for a neighboring farmer should be included.
b) 180 days driving a school bus should not be included.

5. Custom Work (Column 1, Row G)--When a farmer uses his equipment such as a combine, baler, etc. to do custom work for other farmers, these receipts should be included, but with his labor charge taken out. This labor can be included in Labor Off Farm (Column 1, Row F), or in the farm labor section but not in both. The labor charge in custom work needs to be taken out so that correct expense calculations can be made for the cost of running machinery and equipment. If desired, a special crop enterprise called custom work can be analyzed to account for labor used in the custom operation. See page 18 for further information on custom work enterprise. If the operator only does a limited amount of farming and has a large custom operation such as operating a ditching machine, then he becomes a contractor rather than a farmer. These custom receipts should not be included.

6. Wool and Wool Subsidies (Column 1, Row H)--The receipts from government subsidy payments should be included as well as the receipts for the sale of wool.

7. Tax Refund (Column 1, Row J)--This should include refund from federal, gas tax credited on the Form 1040 from the previous year.

8. Miscellaneous Receipts (Column 1, Row M)--Receipts which are not appropriately entered elsewhere are entered here. Receipts from the sale of such items as lumber and pulp wood are recorded here.

9. Government Crop Payments (Column 1, Row N)--Crop payments that are received from the government are entered here. This would include diverted acreage and subsidy payments.

10. Government Payments (Column 1, Row O)--This includes the balance of the Government payments. For example, this account would include Government payments for tile, lime applications, conservation payments, temporary winter cover, etc.

11. Market Livestock Receipts (Column 1, Rows P, Q, R, S)--Includes only market livestock actually sold. Breeding livestock sales should be reported in the capital gains section. For contract feeding, report only the net amount received (i.e., subtract expenses from receipts). For animals grown under contract, care must be taken not to double count or omit

certain expenses. As a general rule, if the gross amount is received and production expenses are paid out by the individual, enter the gross in Cash Receipts and the expenses under the appropriate Cash Expense account. On the other hand, if a net amount is received and entered in Cash Receipts (i.e., certain or all production expenses have been deducted out) DO NOT enter in the Cash Expense section the expenses already deducted. For contract feeding of livestock in which all normal receipts and expenses are not included, please notify the processing center so that the operation is not included in state summaries.

D. CASH EXPENSES (Column 2)

Cash expenses are transferred from pages 54 and 55 of the Ohio Commercial Farm Account Book and are rounded to the nearest whole dollar.

1. Hired Labor (Column 2, Row A)--If members of the family are paid for labor, this should be included as hired labor. Both the employee's share and the employer's share of the social security should be included. Other expenses incurred in providing employee benefits should be included in the labor charge. This includes such items as workman's compensation insurance, health insurance, utilities and housing expenses provided employees, etc. These expenses are types of payments to hired workers and are therefore included under hired labor.

   Farms which have the earnings of one or more operators included in hired labor expense are an exception. If hired labor includes operator's labor, as in corporations, deduct the amount paid each operator from the hired labor expense and enter the hours and expense per hour under Labor on the bottom of page 1 of the data collection form.

2. Feed Purchased (Column 2, Row B)--Enter total cash expense for feed. Feed not fed will be included in inventory and offset this cash expense. Grain purchased for resale should not be entered here. (See Receipts, General Crops, C-2, page 4 of this pamphlet for further explanation.)

3. Farm Supplies (Column 2, Row C)--Straw purchased for bedding, herbicides, insecticides, fungicides and other farm supplies.

4. Miscellaneous Expenses (Column 2, Row I)--Expense items which cannot logically be entered elsewhere are entered here. Record as few items as possible in this account. Legal fees, accounting fees, and educational expenses for the business are entered here. Poultry purchases are included here if they are not depreciated. If depreciated, account for poultry purchases through the depreciation expense and the Capital Gains and Loss sections.

5. Machine Hire and Trucking (Column 2, Row L)--The cost of leasing machinery should be recorded here as well as custom hired machine work, trucking expenses, etc.

6. Breeding and Registration Fees (Column 2, Row P)--Livestock testing association fees, milk testing expense, and registration fees should be included in this section.

7. Feeder Livestock Purchased (Column 2, Row Q)--This should include only purchases made during the record year and excludes animals transferred from the beef breeding or dairy herd. Note that this account is treated differently than for cash basis tax accounting. You should enter here the cost of feeder cattle actually purchased during the record year, regardless of when the feeder cattle are to be sold. Cattle not sold appear in the closing inventory. Poultry purchases should not be entered under this heading. Include them under Miscellaneous Expenses or depreciation (see Miscellaneous Expenses above).

8. Taxes (Column 2, Row R)--Include special assessments for conservation districts if not entered under depreciation.

9. Insurance (Column 2, Bottom Row)--This includes only insurance in connection with the farm business. Insurance on dwellings should not be included unless the dwelling is used to house hired workers (i.e., housing is partial payment to the hired worker).

E. INVENTORIES

Both the beginning and closing inventory values should be taken from the inventory section of the farm account book except for Purchased Breeding Livestock and Land. Be sure not to double count or delete items, especially those in recent transactions or in transactions near the beginning inventory.

1. Purchased Breeding Livestock (Column 3, Row A)--Enter the appraised market value rather than the value listed in the account book. Enter what similar animals would have sold for at the beginning and end of the year. Changes in inventory value of purchased breeding livestock are not included in farm income. Income from purchased breeding livestock is taken as capital gains when the animals are sold.

2. Land (Column 3, Row H)--The current agricultural value of the land is entered here. This is the value based upon what similar land would sell for this year. This price should not include speculative or urban influences but only the agricultural value. Also, the value is only for the land and should not include the value of buildings and fences on the property.

F. CAPITAL GAINS (Column 3)

The sale of raised and purchased breeding livestock should be reported here and not in Cash Receipts. For purchased animals, enter only the amount of the gain or loss and not the amount sold for. For raised breeding livestock, enter the total amount of the sale. Only enter information for livestock and machinery actually SOLD.

G. DEPRECIATION (Column 3)

This information is taken directly from the respective accounts in the farm record book.

H. LABOR (Column 3)

1. Operator's Labor Used--Enter here the number of hours of operator's labor used for the entire year and the value per hour. Enter hours to the left of the decimal point. If two operators are in the operation, list separately on the two lines provided. If there are three operators, put two on one line with 2 under number of operators, the number of hours worked by both operators for the year, and average value per hour. For four operators, put two on each line, etc. As a rule of thumb, farm operators normally work 3,000 hours each year. The value per hour of operator's labor represents what he could earn for performing similar work in the community. This does not necessarily mean working as a hired farm worker, but off-farm jobs as well. DO NOT include in this labor charge a value for management. Labor performed off the farm for which a W-2 form is received is not included in this section. If hired labor includes operator's labor, as in corporations, deduct the amount paid each operator from the hired labor expense and enter the number of man equivalent hours and value per hour under this section. At least ten hours of unpaid labor must be recorded in this section to receive an analysis.

2. Unpaid Family and Hired Labor Used--The number of hours of other unpaid family labor with value per hour and the number of hours of hired labor USED is entered in the remainder of this section. Each member of the family should be assigned a value per hour. If the family labor is actually paid, enter the number of man-equivalent hours on the hired labor line rather than under Unpaid Family Labor, and enter the total wages paid as a hired labor expense under Cash Expenses. Note: One hour of unpaid wife labor and unpaid family labor over 14 years old is assumed to be equivalent to eight-tenths of an hour of operator's labor or hired labor (eight-tenths of a man-equivalent hour). One hour of unpaid family

Labor under [illegible] is assumed to be equivalent to one-half of a man-equivalent hour. If an unpaid family worker performs as much work each hour as an operator, include that worker as an operator rather than Unpaid Wife or Family Labor. This will account for the actual number of work units provided.

PAGE TWO

Place on this page information concerning crop production and feed fed to livestock. Columns 4 and 5 are for the total farm operation. On lines P, Q, R, and [illegible] include only operator's share in Column 5. The remaining columns are for the operator's share only. Columns 1, 2, and 4 through 10 must be completed to receive an analysis. Columns 11 through 16 should be completed if livestock enterprises are to be analyzed. Column 3 is optional. It should be completed if reasonable estimates can be made of the labor needed for each acre of the different crops grown on the farm.

J. CROP PRODUCTION

1. Code (Column 1)--Codes are already printed in for several of the crops. No entry is required for these crops. For those lines that are blank, one of the codes listed below must be supplied if the line is used. Enter codes that are described by the crop heading preceding the code column. For example, on row E, "Other Grain", enter a code for a grain. Codes 46 through 50 may be entered in rows E, F, I, M, P, Q, and R. These codes will print out as "Other General Crop _____ (Code 46)" when entered in rows E, F, I, or M, and as "Other Special Crop _____ (Code 46)" when entered in rows P, Q, and R. Crops entered in rows E, F, I and M will always be treated as a General Crop, and crops entered in rows P, Q, and R will be treated as Special Crops on the crop summary page of the computer printout.

CROP CODES AND STANDARD LABOR REQUIREMENTS

Code	Crop	Hours per Acre
00	All Crops	Does not apply
01	Corn	5
02	Soybeans	4
03	Oats	2
04	Wheat	4
05	Barley	4
06	Grain Sorghum	5
09	Other Grain	5
10	Alfalfa Hay	9
11	Clover, Mixed Hay	9
12	Dehydrated Alfalfa	2
17	Green Chop	5
18	Other Hay	9
19	Haylage	5
20	Direct Cut Grass Silage	5
21	Corn Silage	8
22	Other Silage	7
23	Seed Corn	
24	Seed Soybeans	
25	Seed Wheat	
26	Cabbage	7
27	Potatoes	5

CROP CODES AND STANDARD LABOR REQUIREMENTS (cont.)

Code	Crop	Hours per Acre	Code	Crop	Hours per Acre
28	Grapes	240	39	Other Vegetable	20
29	Sweet Corn	20	40	Rotation Pasture*	2
30	Tobacco	300	42	Permanent Pasture**	1
31	Sugar Beets	22	44	Diverted Acres	2
32	Tomatoes	220	45	Other Special Crop	10
33	Pickles	100			
34	Popcorn	50	46	_____ (List)	10
35	Apples	50	47	_____	10
36	Peaches	50	48	_____	10
37	Strawberries	250	49	_____	10
38	Other Fruit	50	50	_____	10

*Rotation Pasture - This is on land that is tillable and has been tilled recently.

**Permanent Pasture - This is on land that is not tillable or has not been tilled recently.

2. Value Per Unit (Column 2)--Enter values per unit (bushel, ton, or acre) in this column for each crop on the farm. Enter pasture values at the bottom of Column 9. The following table can be used as a guide for estimating the value of Green Chop material and Grass or Legume Silages. When establishing a value per ton for silage and haylage, consider how costs are allocated. Since most silage is not stored to be sold, costs associated with storage should be charged to livestock enterprises and value per ton established as of the date the forage went in the silo. See page 15 under Investment for further explanation.

ESTIMATED VALUE OF GREEN CHOP MATERIAL AND GRASS OR LEGUME SILAGES

Type of Feed	If Price of Good Alfalfa Hay Per Ton Is					
	$20	$25	$30	$35	$40	$50
Green Chop - 18% Dry Matter 1/5* the value of undamaged alfalfa hay made from the same field on the same day.	4.00	5.00	6.00	7.00	8.00	10.00
Direct Cut Silage - 22% Dry Matter ¼* the value of undamaged alfalfa hay made from the same field on the same day.	5.00	6.25	7.50	8.75	10.00	12.50
Wilted Grass Silage - 30% Dry Matter 1/3* the value of undamaged alfalfa hay made from the same field on the same day.	6.60	8.25	9.90	11.55	13.20	16.50

Type of Feed	If Price of Good Alfalfa Hay Per Ton Is					
	$20	$25	$30	$35	$40	$50
Haylage - 45% Dry Matter * the value of undamaged alfalfa hay made from the same field on the same day.	10.00	12.50	15.00	17.50	20.00	25.00
Haylage - 30% Dry Matter 1/3* the value of undamaged alfalfa hay made from the same field on the same day.	13.20	16.50	19.80	23.10	26.40	33.00

*This is a hay equivalent factor. Multiply the weight of the forage times its hay equivalent factor to determine the weight of hay it would have made.

This table represents the values to use when good quality alfalfa is selling for one of the prices specified. Feeds of lower quality will be valued below this. However, these can be obtained from the same table. Suppose good quality alfalfa hay is selling at $30 but the quality of the green chop is low because it was harvested after the best time. Say alfalfa hay harvested at the same time the green chop was taken would have only been worth $27 per ton. Reading off the table under $25, we see that the green chop is valued at $5.00 per ton.

The value of corn silage would vary between $8.00 and $11.00 per ton for normal corn silage harvested at 30-36% dry matter and between $12.00 and $16.00 per ton for normal corn silage harvested at 40-45% dry matter.

Per acre charges for dairy pasture would vary from $20 for excellent, $15 for good, $10 for fair, to $6 for poor. Beef will usually run on poorer land, thus the range for beef would probably be between $12 and $6 with most being under $10 per acre.

Permanent pasture will usually have a lower charge than rotation pasture with excellent permanent pasture probably being worth around $12 per acre.

If all of the available permanent pasture is not pastured, the value per acre assigned should be the average value of the acreage actually pastured. Only the actual number of acres pastured should be entered in Pasture Acres, Column 4 and Column 10.

In addition to the regular rotation pasture, some hay acreage may be pastured after 1 or 2 cuttings or over the winter. The value per acre assigned to hay acreage should include this pasture value.

3. Labor Per Acre (Column 3)--This column is optional. Adjusted standard labor requirements per acre will be used unless values are entered in this column (see table on page 9). If actual values or reasonably accurate estimates are not known, leave this column blank. The labor required per unit includes both direct and indirect labor used. If only direct labor requirements are known, add approximately 25 percent for indirect labor. If a value is entered in this column for any crop grown, a value must be entered for all crops grown and the labor section on page 4 must have an entry for each type of livestock on the farm. Incomplete use of the labor sections is not permitted. If labor requirements are known for only one or two crops, enter these and copy in the standard for other crops and livestock grown. If all entries are not made, no labor will be allocated to the enterprises which are omitted. Farmers with special crops should enter their own labor requirements. The standards which would otherwise be used are applicable to only a small number of farms.

4. Total Acres (Column 4)--Care must be taken to make certain that acreages entered in this column are correct because labor requirements, average yields, and various cost per acre calculations are calculated from these values. Lines A through V should always total to line W (i.e., the total acreage farmed) except where two crops are taken from the same field and a tillage operation performed between them. When two or more crops were taken from the same field during a year, refer to the following examples to determine the correct acreage figure to enter. If two or more crops were harvested without a tillage operation being performed between them (for example, haylage and hay), divide the acreage according to the relative values of the different crops. If two or more crops were harvested with a tillage operation being performed between them (for example, hay and then corn), enter the actual acres of each harvested. If hay was harvested and then the field pastured, enter the total acreage as hay. If part of a hay field was harvested and the rest not, enter the acres harvested as hay and the remainder as pasture. See the examples below for further explanation.

EXAMPLES:

a. If, from a 24 acre field, 1½ tons of hay per acre is taken off in one cutting and 3 hay equivalent tons per acre of haylage (6 tons at 45% dry matter) in another cutting, then 8 acres is shown as hay and 16 acres as haylage. DO NOT count the acreage twice. The individual crop acreage figures must add up to the total crop acres owned and rented.

b. If the same hay field had been cut one time, removing one-half of the value of forage produced that year, and then pastured the remainder of the year, this field would be accounted for in Column 4 as 12 acres of hay and 12 acres of Rotation Pasture.

c. If the acreage of rotation and permanent pasture actually pastured is less than the amount of pasture on the farm, enter the unpastured acres under "Other Land". Enter only the pasture acreage which actually produced some feed for animals on the farm under rotation pasture or permanent pasture. The value per acre should reflect the average value per acre of forage removed from the pastured land.

d. If a cutting of hay was taken from a 20-acre field and then corn planted and harvested, enter 20 acres for hay and 20 for corn. The same would be true for wheat followed by soybeans within the same year. Double use of a field in this manner results in a larger number of acres accounted for than is actually farmed (i.e., lines A through V will EXCEED the total acreage figure on line W by the amount of the acreage in the field double-cropped). Otherwise, lines A through V should total to line W.

Lines A through T with the exception of line O (i.e., permanent pasture is not considered crop land) should total to the acreages listed on lines X and Y. However, double use of a field with a tillage operation results in a larger number of acres accounted for than is actually owned and rented.

5. Total Production (Column 5)--The total bushels, tons, or dollars of each crop produced is entered here (this is not a per acre figure). Round values to the nearest whole number. For special crops, the dollar amount received for each crop is entered.

6. Share of Production (Column 6)--The operator's share of production is entered here. For a tenant farm do not include the landlord's share.

7. Inventories, Sales (Column 7-9)--Enter only the operator's share of beginning inventory, sales, and ending inventory. Note that Column 6 plus Column 7 should equal Column 8 plus Column 9 plus Column 10.

8. Fed on Farm (Column 10)--The total amounts of each crop fed are entered here. For lines A through M the amount is calculated by adding the operator's share of Production and Beginning Inventory and subtracting the operator's share of sales and closing inventory. For pasture, rows N and O, the operator's

share of the actual acres pastured are entered. For purchased feeds, the operator's share of pounds (rows Q, T, and W) and value (rows R, U, and X) of the supplement, grain and roughage actually fed are entered. If a breakdown cannot be made for grain, supplement, and roughage enter the total dollars fed on the supplement line. The same is true for pounds. If the pounds cannot be determined, the figure can be omitted.

K. CROPS FED TO LIVESTOCK

The total operator's share of each feed fed to livestock (shown in Column 10) is allocated to the enterprise that consumed it (Columns 11 through 16). The individual figures in columns 11 through 16 on each line should total to the value on the same line shown in Column 10.

PAGE THREE

L. ENTERPRISE EXPENSE DISTRIBUTION

Enter in this section the dollar value of expense items for each enterprise which you want analyzed. Each livestock enterprise must be reported separately. Crops may be reported individually or as a composite. If crops are handled as a composite, use the enterprise code 00. You may have an analysis of all of your enterprises or part of them.

A maximum of 19 enterprises may be analyzed. If more than 12 enterprises are analyzed, use two copies of page 3 of the Data Collection Form.

Round all entries to the nearest whole dollar. Please be careful to make all entries legible. If there are enough spaces, skip a line after each row filled out. Make no entry on the expense distribution page for homegrown feed. Feed expenses are taken from columns 11 through 16 on page 2.

1. Enterprise Code--Enter in the first row the code for each enterprice submitted for analysis. The codes are listed on the bottom of page 3 of the data collection form.

2. Total--The column marked TOTAL is for your convenience only. It does not have to be filled out. Total cash expenses and depreciation may be copied directly from page 1, columns 2 and 3. Total investment may be obtained by adding beginning inventory and ending inventory (page 1, column 3) and dividing by two. Filling in this row may save you some time in looking for figures.

3. In the remaining rows enter the expenses for each enterprise you want analyzed. Be sure to include indirect hired labor for each enterprise. Indirect labor is normally about one-fourth of the total labor requirement. For items which may be stored such as fuel, seed, or purchased feed, be sure to correct expenses for any changes in inventory so that only the amount used during the year is charged to the enterprise.

or example, if be innin inventory for purchased feed shows $1,000 and e ding inventory for purchased feed shows $2,000; expenses for purch sed feed should be $1,000 less than the cash expense for purchased feed. A form for breaking down depreciation expenses and investment to different enterprises may be obtained from the extension office or vocational agriculture teacher. See Investment below for further discussion of cost breakdown.

4. Under taxes enter only property taxes, real estate taxes, and special assessments which have not already been included under depreciation (such as conservation district assessments). Social security taxes should be included under hired labor expense, fuel taxes should be included under fuel expense, and other taxes such as sales tax should be included under the item on which the tax was paid.

5. Investment-- nter the amount of capital that is invested in the enterprise, both owned and borrowed. Include in this figure all cash expenses and home grown feeds that are tied up in the enterprise as well as real estate, equipment, and livestock. Where two enterprises are closely related, separate the investment in them according to how the investment items are used. For example, a dairy enterprise and corn silage enterprise are closely related when considering investment in silos. Since silage is not normally stored for resale, the cost and investment for storing silage should be charged to the dairy enterprise. Cost and investment of putting the silage into the silo should be charged to the silage enterprise. The silage price should reflect prices at the time of harvest, not the price after it has been stored for several months. Likewise, if grain is stored, the sale price should reflect the costs and investments that are charged to the grain. If storage costs and investments are charged to the grain enterprise, the price of the grain should reflect the price when sold or used. If storage costs and investments are not charged to the grain, the price should reflect prices at the time of harvest.

PAGE FOUR

Enter on this page information concerning livestock enterprises. This information is for the operator's share only. An enterprise section must be FILLED IN COMPLETELY to receive an analysis of that enterprise. Where weights, animal numbers, and dollar values are requested, they must be entered. An enterprise analysis cannot be completed if these items are not provided.

All livestock enterprises on the form should have complete entries on this page. This is necessary because labor is allocated to the

various enterprises from entries on pages 2 and 4. If an enterprise is left out, all of the labor used in that enterprise will be allocated to the other enterprises on the farm. For example, if an individual has hogs and cattle, but wants a detailed analysis on the hogs only, he must complete the necessary information on page 4 concerning cattle to get an accurate analysis on the rest of his enterprises.

1. Percent of Total--Information on this page is for the operator's share of livestock only. The percent of total livestock which the operator's share represents must be indicated at the top of this page. For example, if the operator has a 50-50 livestock share lease, number of animals, weights, pounds sold, etc. are entered for the operators half only, and 50% would be entered on the Percent of Total line. This percentage figure is used in calculating the amount of labor provided by the operator (including his family and hired labor). The operator is assumed to provide all labor for the livestock enterprise. For example, if the operator's share is 50%, the labor (a standard or an entry from the livestock labor section) needed for each cwt weight gained or animal entered on page 4 is multiplied by two to allocate the correct amount of labor to the livestock enterprises. This calculation is made to account for labor used by the other 50% of the animals which are not included in the numbers listed on page 4, but which do require time from the operator. When the operator's share is 100%, no multiplication of labor requirements takes place.

   If the labor allocated to a livestock enterprise will be incorrect with the standard method, enter labor requirements in the labor section on page 4, or a Percent of Total at the top of the page which will bring about the correct labor allocation. For example, an absentee owner with a 50-50 livestock share lease on a livestock enterprise will likely have too much labor allocated to his livestock enterprises. To correct this situation, he can enter 100% under Percent of Total, and enter labor requirements in the livestock labor section which reflect the time he used in the livestock enterprise. A farm operator who owns 67% of a beef cow enterprise, all of a hog enterprise, and provides all of the labor for both, will have an incorrect allocation of labor to his hog operation when he enters 50% in the Percent of Total line. To correct this situation, he enters a requirement in the livestock labor section on page 4 which will allocate his actual number of hours to the hog operation. Consider that his pork production during the year was 100,000 pounds and his labor requirement for the hog operation was 600 hours. To find how much labor went into each thousand pounds of pork produced, he divides 600 hours by 100 and gets 6 hours per 1000 pounds of gain. Since the program will multiply the requirement which he enters by 1.5 (to

account for the labor used by one-third of the animals not owned as indicated under Percent of Total), he divides his actual requirement by 1.5. His entry on the "MKT. Hog-Weaning to Market-Per 1,000 lbs. gain" line will be 4.0. Note: In all cases, enter the operator's share of livestock numbers, value, weight gained, etc.

N. Labor--This section is optional. Labor standards listed below will be used unless values are entered here. If actual values, or reasonably accurate estimates are not known, leave this section blank. The labor required per unit includes both direct and indirect labor used. If only direct labor requirements are known, add approximately 25 percent for indirect labor. If a value is entered in this section for any livestock enterprise, a value must be entered for all livestock enterprises and all crop enterprises. If the labor requirements are known for only one enterprise, enter them AND then copy the other livestock and crop requirements not known from the standards listed below and on page 10. Incomplete use of the labor sections will result in no allocation of labor to enterprises omitted from these sections.

Standard Labor Requirement Used in Analysis

Animal Unit	Average Number of Hours Per Year For Each Unit
Dairy Cow	60.0
Replacement Heifer-Dairy	15.0
Litter-Farrow to weaning	7.0
Market Hog-Weaning to Market-Per 1,000 pounds of gain	7.2
Boar	3.0
Beef Cow	12.0
Beef Bull	20.0
Replacement Heifer-Beef	10.0
Beef Feeder-Per 1,000 pounds of gain	10.0
Poultry-Per 1,000 Laying Hens	150.0
Ewes and Lamb-to weaning	6.0
Lambs-Per 100 pounds gain	4.0
Dairy Bull	20.0
Turkeys-Per 1,000 pounds sold	4.3
Broilers-Per 1,000 pounds sold	2.8

O. Average Number of Animals--To find the average number of animals for entries on this page, please follow the directions listed below.

1. Number of Litters Farrowed and Number of Pigs Weaned--Just add the number of farrowings for the year or the number of pigs weaned for the year.

2. Average Number of Dairy Cows--Add the number of cows on hand at the 15th of each month and divide this total by 12. If a cow is sold before the 15th of the month or purchased after the 15th of the month, do not include her in the monthly total. This entry should be to the nearest one-tenth of a cow.

3. Average Butterfat Test--To the nearest one-hundredth of a percent. Multiply the average butterfat test for each month by the cwt milk sold that month, total these figures, and divide by the total cwt milk sold during the year.

4. Number of Beef Cows Bred to Calve--Enter the number of cows bred to calve during the year for which this report is filed.

5. Number of Calves Saved--Enter the number of calves born during the year which were either weaned or were alive at the end of the year.

6. Number of Ewes Exposed--Enter the number of ewes bred to lamb during the year for which this report is filed.

7. Number of Lambs born--Enter the total number of live lambs born during the year.

8. Average Number of Laying Hens--Add the number of laying hens in inventory each month and divide by 12.

P. Special Use of Enterprise Analysis Section--The farm business analysis will analyze enterprises not included in the enterprise list on page 3 if the data is properly entered, and the analyzed information is correctly interpreted. The idea is to enter information under headings that may be different from those desired, but in the same types of categories such as receipts, expenses, or units of production. For example, a retail sod enterprise can be analyzed by entering information on page 2 under special crop (coded 46 to 50). The amount of sales dollars would be entered under Total Production (Col. 5), the number of production units under acres (Col. 4), and the hours of labor required for each unit under Labor/Acre (Col. 3). (Remember to complete the labor sections on pages 2 and 4). Then enter expenses on page 3 under the same code. If expense headings on the input form are not correct, enter expenses under the headings that are there, but write down in your records the correct expense headings in the order in which they were entered, so that the results can be properly interpreted.

Example Two, Custom Work-- Custom work may be analyzed as a general crop. This will result in correctly allocating labor used in custom work activities, but may make return per acre and several other figures on page 6 of the computer printout invalid. To analyze custom work, use the following procedure.

1. Enter in Column 1, page 2, a code 46 to 50 in line E, F, I, or M. The printout will list this as "Other General Crop _____ (code 48)". Record the enterprise that goes with each code on the data collection form when special enterprise analyses are used.

2. Enter in Column 2 the amount of dollars received per acre and in Columns 5, 6, and 8 the number of acres harvested. Or if desired, enter $1.00 in Column 2 and the total cash receipts received for custom work in Columns 5, 6, and 8.

3. Enter in Column 3 the hours of labor required for each acre.

4. Enter in Column 4 the number of acres for which payment was received.

5. Enter on page 3 the expenses under the same code used on page 2. Investment may be relatively low, because the machinery may be required for other enterprises on the farm, with custom work taking place only if weather permits.

NOTE: PLEASE INCLUDE A NOTE TO INFORM THE PROCESSING CENTER OF ANY SPECIAL ANALYSIS. Include in this note the type of enterprise being analyzed. Without this note, such enterprises could be included in the state summary.

Example three, Poultry--Livestock enterprises may also be used for special enterprise analysis. For example, a laying hen enterprise can be analyzed under the dairy enterprise section. This will give information on a per bird and per 100 eggs sold basis. To do this:

1. Enter the receipts from the sale of eggs under milk and cream receipts in Column 1 on page 1.

2. On page 4, enter under "milk sales-Total Pounds" the number of eggs sold. This will give information per 100 eggs produced. To receive information per 100 dozen eggs produced, enter dozens of eggs sold under pounds of "milk sales-Total Pounds".

3. Enter 3.0 under average butterfat test.

4. Enter average number of hens under "average number of cows in the herd". This will give analysis of receipts and expenses per bird. If an analysis per 10 birds is desired, divide number of hens by 10 and enter this figure.

5. Enter on page 4 amounts of feed fed to the poultry enterprise under "Dairy" on Column 11.

6. When entering inventory, sales, and purchases, be sure that the value of beginning inventory plus purchases equals the value of ending inventory plus sales. Otherwise cost and income information per 100 eggs will be increased or reduced by the amount that animal value is reduced or increased. Account for decrease in hen value under depreciation or under some other expense item.

7. Do not use purchased breeding livestock as an expense item. It will not be included in expense totals for analyzing enterprises.

GENERAL GUIDELINES FOR SPECIAL ENTERPRISE ANALYSIS

1. Entries on the input form must not exceed 7 digits (9,999,999 or 99,999.99).

2. Income for crop enterprises is taken from information on page 2. Income for livestock enterprises is taken from page 1 for cash receipts and from page 4 for changes in inventory value.

3. Purchased breeding livestock expense should not be used for cash expenses. This expense category is not included in expense totals.

4. Value per acre, percent of crops in corn and soybeans, and costs per acre listed on page 6 (crop summary page) of the computer printout may be invalid if crop enterprises are used for special analysis. Return per $ feed fed listed on page 6 may be invalid if livestock enterprises are used for special analysis.

5. One cent is the lowest cost and income information given for enterprise analysis. Be sure the production unit (acre, cow, hen, dozen eggs, etc.) is large enough to have expenses print out larger than one cent. For example, tax expense per dozen eggs may be less than one cent and thus not be listed if analysis is per dozen eggs.

6. Retain a record of special entries to be sure proper interpretation of the analysis can be made. Only standard headings will be listed on the computer printout. Different headings can be handwritten over standard headings before interpretation of the analysis.

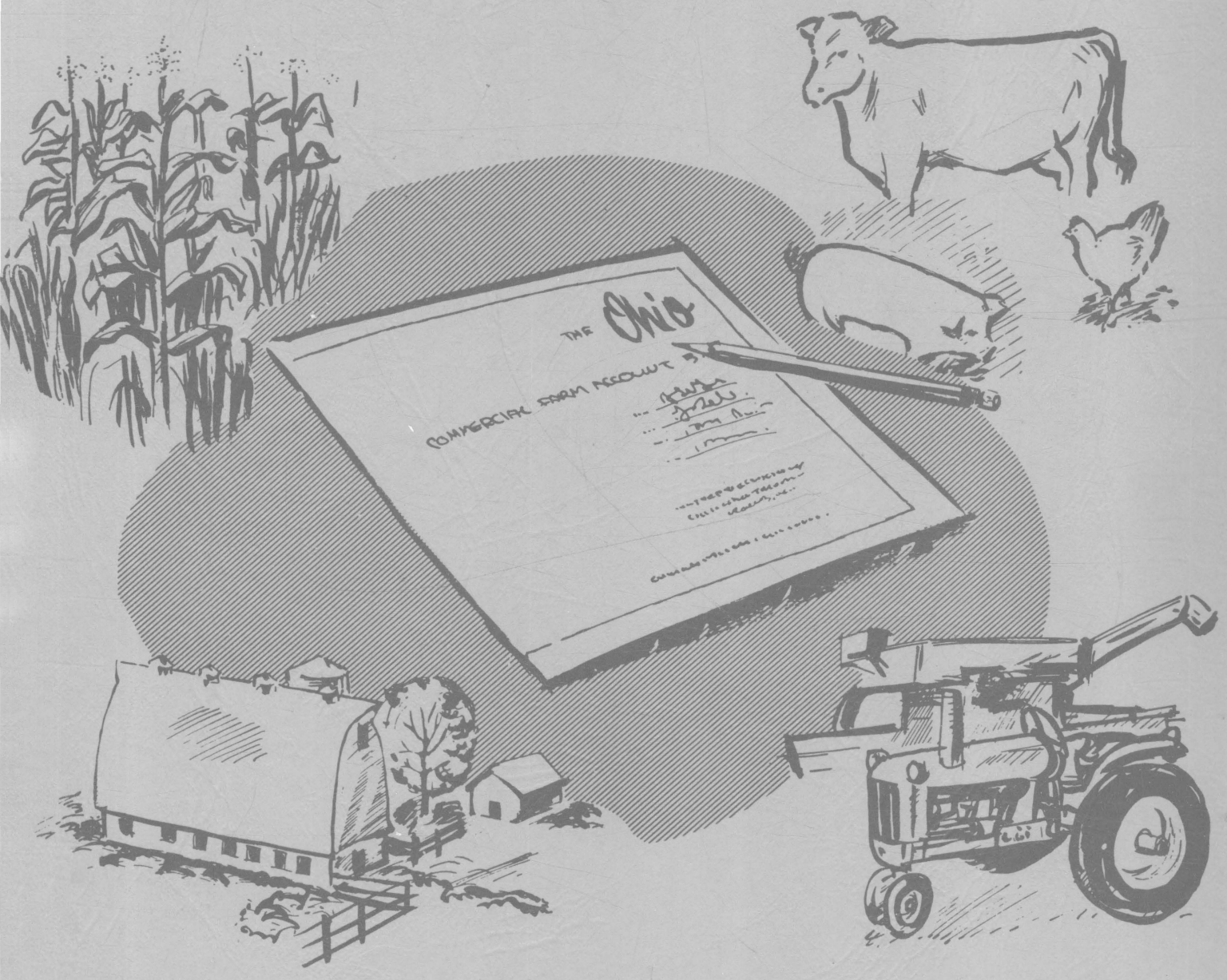
7. NOTIFY THE PROCESSING CENTER OF ANY SPECIAL ANALYSES SO THAT THESE ANALYSES ARE NOT INCLUDED IN STATE SUMMARIES.

If you have questions which are not answered in this pamphlet, please contact your Area Farm Management Agent, County Agent, or Vocational Agriculture Teacher.

1972

Farm Business Analysis Report

INDIVIDUAL



Department of Agricultural Economics and Rural Sociology
COOPERATIVE EXTENSION SERVICE
THE OHIO STATE UNIVERSITY
Columbus, Ohio

OHIO STATE UNIVERSITY
DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY
FARM BUSINESS ANALYSIS

DATA YEAR 1972
FARM NO 994
AREA NO 10
COUNTY NO 40 FULL OWNER

* FINANCIAL SUMMARY *	THIS YEAR * * * * * * * * * * 1972 * * * * * * * * * *		
INCOME			
CASH RECEIPTS	$56,959		
CAPITAL GAINS AND LOSSES	$2,857		
INVENTORY CHANGES	$10,050		
- FEEDER LIVESTOCK			
GROSS FARM INCOME		$69,866	
EXPENSES			
CASH EXPENSES	$33,714		
DEPRECIATION	$6,438		
INTEREST NOT CHARGED	$5,013		
UNPAID OPERATOR AND FAMILY LABOR	$11,500		
- FEEDER LIVESTOCK			
TOTAL FARM EXPENSE		$56,665	
MANAGEMENT INCOME AND PROFIT		$13,201	
MANAGEMENT INCOME AND PROFIT AS A PERCENT OF GROSS INCOME		18.8 %	
UNPAID OPERATOR AND FAMILY LABOR		$11,500	
UNPAID OPERATOR AND FAMILY LABOR AS A PERCENT OF GROSS INCOME		16.4 %	
OVERHEAD COSTS		$20,946	
OVERHEAD COSTS AS A PERCENT OF GROSS INCOME		29.9 %	
VARIABLE COSTS		$24,219	
VARIABLE COSTS AS A PERCENT OF GROSS INCOME		34.6 %	
NET CASH INCOME		$23,245	
NET FARM INCOME		$29,714	
TOTAL INVESTMENT		$150,396	
RETURN TO INVESTMENT		$22,224	
PERCENT RETURN ON INVESTMENT		14.7 %	
GROSS INCOME PER $1,000 INVESTED		$464	
LABOR EFFICIENCY FACTOR			.807

	TOTAL	HOUR
RETURN TO UNPAID OPERATOR AND FAMILY LABOR, MANAGEMENT, AND PROFIT	$24,701	$6.95

CHIC STATE UNIVERSITY
DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY
FARM BUSINESS ANALYSIS

DATA YEAR 1972
FARM NO 994
AREA NO 10
COUNTY NO 40

FULL OWNER

* FINANCIAL SUMMARY *

THIS YEAR
* * * * * * * * * * 1972 * * * * * * * * * *

CASH RECEIPTS	
MILK AND CREAM	$43,505
POULTRY AND EGGS	
GENERAL CROPS	$2,047
SPECIAL CROPS	
CASH RENT AND ROYALTIES	$254
LABOR OFF FARM	$785
CUSTOM WORK	
WOOL	
OTHER LIVESTOCK PRODUCTS	
TAX REFUND	$176
PATRONAGE DIVIDEND	$451
BREEDING FEES RECEIVED	
MISCELLANEOUS RECEIPTS	$2,456
GOVERNMENT PAYMENTS	$2,950
GOVERNMENT CROP PAYMENTS	$3,586
MARKET LIVESTOCK	
SWINE	
CATTLE	
VEAL CALVES	$749
LAMBS	
TOTAL CASH RECEIPTS	$56,959

CASH EXPENSES	
PURCHASED FEED	$6,300
HIRED LABOR	$5,350
FARM SUPPLIES	$1,150
MACHINERY REPAIRS	$1,655
BLDG., FENCE, TILE, ETC. REPAIRS	$1,300
FUEL, OIL, AND GREASE	$2,050
UTILITIES (FARM SHARE)	$885
DRYING AND STORAGE	$34
MISCELLANEOUS EXPENSES	$245
SEEDS AND PLANTS	$1,225
FERTILIZER AND LIME	$3,400
MACHINE HIRE AND TRUCKING	$265
AUTO EXPENSE (FARM SHARE)	$300
INTEREST ON NOTES AND MORTGAGE	$4,010
VETERINARY AND MEDICINE	$810
BREEDING FEES AND REGISTRATION	$550
FEEDER LIVESTOCK PURCHASE	
TAXES	$1,400
CASH RENT	$1,835
INSURANCE	$950
TOTAL CASH EXPENSES	$33,714

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FARM BUSINESS ANALYSIS

DATA YEAR 1972
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AREA NO 10
COUNTY NO 40 FULL OWNER

* FINANCIAL SUMMARY *

THIS YEAR
* * * * * * * * * 1972 * * * * * * * * * *

	GAIN	LOSS
CAPITAL GAIN		
RAISED BREEDING STOCK	$3,600	
PURCHASED BREEDING STOCK		$738-
MACHINERY AND EQUIPMENT		$5-
TOTAL CAPITAL GAIN OR LOSS	$2,857	
NET INVENTORY CHANGE		
RAISED BREEDING LIVESTOCK	$5,475	
MARKET LIVESTOCK		
GRAIN, HAY, SUPPLEMENT	$4,575	
SUPPLIES AND FERTILIZER		
TOTAL INVENTORY CHANGE	$10,050	
DEPRECIATION	***\

THIS YEAR

** LABOR EFFICIENCY ** * * * * * * * * * * 1972 * * * * * * * * * * *

REPORTED LABOR USED ON FARM

	HOURS	VALUE/HR
OPERATORS LABOR USED		
NUMBER OF OPERATORS 1	3,000.0	$3.25
UNPAID FAMILY LABOR USED		
WIFE	700.0	$2.50
FAMILY LABOR OVER 14		
FAMILY LABOR UNDER 14		
HIRED LABOR	3,950.0	
NUMBER OF MAN EQUIVALENT HOURS USED		7,510
NUMBER OF PMWU USED		751
NUMBER OF MAN-YEAR EQUIVALENTS USED		2.50
VALUE OF OPERATORS LABOR USED		$9,750
VALUE OF UNPAID FAMILY LABOR USED		$1,750
VALUE OF HIRED LABOR USED		$5,350
VALUE OF TOTAL LABOR		$16,850
VALUE OF LABOR PER MAN HOUR EQUIVALENT		2.24
VALUE OF LABOR PER PMWU		$22.43
VALUE OF LABOR PER MAN-YEAR EQUIVALENT		$6,740

DATA YEAR 1972
FARM NO 994
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COUNTY NO 40 FULL OWNER

OHIO STATE UNIVERSITY
DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY
FARM BUSINESS ANALYSIS

THIS YEAR

** LABOR EFFICIENCY ** * * * * * * * * * * 1972 * * * * * * * * * *

ADJUSTED PRODUCTIVE MAN WORK UNITS HAVE BEEN CALCULATED TO REFLECT LABOR ACTUALLY USED ON YOUR FARM. IF YOU DID NOT REPORT LABOR USED PER ACRE OF CROPS OR PER UNIT OF LIVESTOCK, STANDARD PRODUCTIVE MAN WORK UNITS (COLUMN 2) WERE ADJUSTED (COLUMN 3) TO REFLECT LABOR ACTUALLY USED. IF YOU DID REPORT YOUR OWN LABOR FIGURES (COLUMN 4) THEY WERE ADJUSTED (COLUMN 5) WHEN NECESSARY TO CORRELATE THE SUM OF YOUR INDIVIDUAL ENTERPRISE USAGES WITH THE TOTAL USAGE FOR THE ENTIRE FARM. IN EITHER CASE, ADJUSTED PRODUCTIVE MAN WORK UNITS WERE USED TO CALCULATE LABOR USAGE AND COSTS. THIS PROCEDURE GUARANTEED THAT LABOR COSTS AND USAGE WERE COMPUTED ACCORDING TO THE LABOR FIGURES YOU REPORTED ON PAGE 1 OF THE 7363.

PRODUCTIVE MAN WORK UNITS (PMWU) CHART (INDENTATION DENOTES SUBSIDIARY ENTERPRISE)

ITEM	STANDARD PMWU	(PER UNIT)	ADJUSTED STANDARD PMWU	(PER UNIT)	INDIVIDUAL PMWU	(PER UNIT)	ADJUSTED INDIVIDUAL PMWU	(PER UNIT)
CORN	42.0	.5000	52.0	.6195	52.9	.6300	64.9	.7737
SOYBEANS	16.0	.4000	19.8	.4956	19.2	.4800	23.5	.5895
OATS	5.4	.2000	6.6	.2478	5.4	.2000	6.6	.2456
WHEAT	12.4	.4000	15.3	.4956	9.3	.3000	11.4	.3684
HAY	76.5	1.8000	94.7	2.2304	66.0	1.5500	81.0	1.9036
ALFALFA	40.5	.9000	50.1	1.1152	36.0	.8000	44.2	.9825
CLOVER	36.0	.9000	44.6	1.1152	30.0	.7500	36.8	.9211
CORN SILAGE	18.4	.8000	22.8	.9913	12.6	.5500	15.5	.6754
HAYLAGE	11.0	.5000	13.6	.6195	13.2	.6000	16.2	.7368
PERM. PAST.	4.6	.1000	5.7	.1239	3.6	.0800	4.5	.0982
DIVERTED ACR	9.4	.2000	11.6	.2478	2.3	.0500	2.8	.0614
OTHER LAND	.7	.1000	.8	.1239				
DAIRY	410.1	9.5000	508.1	11.7719	426.7	9.3000	524.1	11.4218
COWS	348.6	6.0000	431.9	7.4349	366.0	6.3000	449.5	7.7374
HEIFERS	58.5	1.5000	72.4	1.8587	58.5	1.5000	71.8	1.8422
BULLS	3.0	2.0000	3.7	2.4783	2.2	1.5000	2.7	1.8422
TOTAL PMWUS	606.5		751.5		611.4		750.9	

LABOR EFFICIENCY FACTOR	.807
STANDARD LABOR ADJUSTMENT FACTOR	1.23
INDIVIDUAL LABOR ADJUSTMENT FACTOR	1.22816

*** CROPS SUMMARY ***

THIS YEAR
* * * * * * * * * * 1972 * * * * * * * * * *

CROP PRODUCTION

	ACRES	YIELDS	TYPE
CORN	84	100.00	BU
SOYBEANS	40	9.10	BU
OATS	27	50.00	BU
WHEAT	31	40.50	BU
ALFALFA	45	2.40	TON
CLOVER	40	2.20	TON
CORN SILAGE	23	18.20	TON
HAYLAGE	22	6.80	TON

GENERAL CROP ACRES	312		
SPECIAL CROP ACRES			
TOTAL HARVESTED CROP ACRES	359		
VALUE OF GENERAL CROPS	$26,183		
VALUE OF SPECIAL CROPS			
VALUE OF ALL CROPS	$29,769		
GENERAL CROP PROD. VALUE/ACRE		$83.91	
SPECIAL CROP PROD. VALUE/ACRE			
ALL CROP PROD. VALUE/ACRE		$82.92	
DIVERTED ACRES	47		
CROP ACRES PAYMENT	$3,586		
PERCENT OF GEN CROPS IN CORN AND SOYBEANS		47.1 %	
PERCENT TOTAL TILLABLE ACRES IN CORN AND SOYBEANS		40.9 %	
FERTILIZER AND LIME COST PER ACRE		$9.49	
MACHINERY INVESTMENT PER CROP ACRE		$61.21	
TOTAL POWER AND MACHINERY COST	$9,976		
MACHINERY COST PER CROP ACRE		$27.78	

**** LIVESTOCK SUMMARY ****

TOTAL VALUE OF FEED FED TO ALL LIVESTOCK ENTERPRISES	$26,172		
VALUE OF NET LIVESTOCK INCREASE	$50,645		
RETURNS PER $ FEED FED TO ALL LIVESTOCK ENTERPRISES			$1.93

CHIC STATE UNIVERSITY
DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY
FARM BUSINESS ANALYSIS

DATA YEAR 1972
FARM NO 994
AREA NO 10
COUNTY NO 40 FULL OWNER

*** ALL CROPS ***

T H I S Y E A R
* * * * * * * * * * 1972 * * * * * * * * * *

GENERAL INFORMATION

CROP

	ACRES	YIELDS	TYPE
CORN	84	100.00	BU
SOYBEANS	40	9.10	BU
OATS	27	50.00	BU
WHEAT	31	40.50	BU
ALFALFA	45	2.40	TON
CLOVER	40	2.20	TON
CORN SILAGE	23	18.20	TON
HAYLAGE	22	6.80	TON

PER ACRE INFORMATION	TOTAL	PER ACRE
PRODUCTIVE MAN WORK UNITS	226	.63
VALUE OF ALL LABOR USED	$5,087	$14.17
VALUE OF PRODUCTION	$29,769	$82.92
EXPENSES		
CASH		
HIRED LABOR	$2,350	$6.54
FARM SUPPLIES	$400	$1.11
MACHINE REPAIRS	$1,125	$3.13
BUILD FENCE ETC	$360	$1.00
FUEL OIL & GRSE	$1,300	$3.62
UTILITIES	$160	$.44
DRYING & STORAGE	$34	$.09
MISC EXPENSE	$95	$.26
SEEDS & PLANTS	$1,225	$3.41
FERTILIZER LIME	$3,400	$9.47
MACHINE HIRED TRK	$200	$.55
AUTO EXPENSE	$150	$.41
INTEREST ON NOTES	$2,000	$5.57
TAXES	$750	$2.08
RENT	$1,850	$5.15
INSURANCE	$300	$.83
TOTAL CASH	$15,699	$43.72

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FARM BUSINESS ANALYSIS

DATA YEAR 1972
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*** ALL CROPS ***	THIS YEAR * * * * * * * * * * 1972 * * * * * * * * * *	
DEPRECIATION		
BLDG FENCE TILE	$670	$1.86
MACHINERY & EQUIP	$2,750	$7.66
TOTAL DEPRECIATION	$3,420	$9.52
UNPAID OPR. AND FAM. LABOR	$2,737	$7.62
INTEREST NOT CHARGED	$2,710	$7.54
TOTAL EXPENSES	$24,566	$68.43
MANAGEMENT INCOME AND PROFIT	$5,202	$14.49
VALUE OF PRODUCTION - CASH EXPENSES	$14,070	$39.19
TOTAL INVESTMENT	$78,500	$218.66
RETURN ON INVESTMENT	$9,912	$27.61
PERCENT RETURN ON INVESTMENT	12.62 %	12.62 %
RETURN TO UNPAID OPERATOR AND FAMILY LABOR, MANAGEMENT AND PROFIT	$7,940	HOUR $15.05

OHIO STATE UNIVERSITY
DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY
FARM BUSINESS ANALYSIS

DATA YEAR 1972
FARM NO 994
AREA NO 10
COUNTY NO 40

FULL OWNER

THIS YEAR
* * * * * * * * * * 1972 * * * * * * * * * *

GENERAL INFORMATION
**** CORN *****

PRODUCTION UNIT	BUSHEL
POUNDS PER UNIT	56
ACRES	84
VALUE PER UNIT	$1.23
VALUE PER POUND	$.022

ACRE INFORMATION	TOTAL	PER ACRE
UNITS PRODUCED	8,400	100
POUNDS PRODUCED	470,400	5,600
PRODUCTIVE MAN WORK UNITS	64	.77
VALUE OF LABOR USED	$1,457	$17.35
VALUE OF PRODUCTION	$10,332	$123.00
EXPENSES		
CASH		
HIRED LABOR	$161	$1.91
FARM SUPPLIES	$290	$3.45
MACHINE REPAIRS	$448	$5.33
BUILD FENCE ETC	$67	$.79
FUEL OIL & GRSE	$355	$4.22
UTILITIES	$25	$.29
MISC EXPENSE	$25	$.29
SEEDS & PLANTS	$546	$6.50
FERTILIZER LIME	$1,832	$21.80
MACHINE HIRED TRK	$90	$1.07
AUTO EXPENSE	$20	$.23
INTEREST ON NOTES	$500	$5.95
TAXES	$180	$2.14
RENT	$300	$3.57
INSURANCE	$65	$.77
TOTAL CASH	$4,904	$58.38

CHIO STATE UNIVERSITY
DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY
FARM BUSINESS ANALYSIS

DATA YEAR 1972
FARM NO 994
AREA NO 10
COUNTY NO 40

FULL OWNER

	THIS YEAR * * * * * * * * * * 1972 * * * * * * * * * *	
DEPRECIATION		
BLDG FENCE TILE	$180	$2.14
MACHINERY & EQUIP	$660	$7.85
TOTAL DEPRECIATION	$840	$10.00
UNPAID OPR. AND FAM. LABOR	$1,296	$15.43
INTEREST NOT CHARGED	$940	$11.19
TOTAL EXPENSES	$7,980	$95.00
MANAGEMENT INCOME AND PROFIT	$2,351	$27.99
VALUE OF PRODUCTION - CASH EXPENSES	$5,428	$64.61
TOTAL INVESTMENT	$24,000	$285.71
RETURN ON INVESTMENT	$3,791	$45.13
PERCENT RETURN ON INVESTMENT	15.79 %	15.79 %
RETURN TO UNPAID OPERATOR AND FAMILY LABOR, MANAGEMENT AND PROFIT	$3,648	HOUR $6.87

OHIO STATE UNIVERSITY
DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY
FARM BUSINESS ANALYSIS

DATA YEAR 1972
FARM NO 994
AREA NO 10
COUNTY NO 40 FULL OWNER

THIS YEAR

*** DAIRY SUMMARY *** * * * * * * * * * 1972 * * * * * * * * * *

GENERAL INFORMATION		
NUMBER OF COWS		58.1
NUMBER OF COWS PER MAN EQUIVALENT		33.2
DAIRY RETURNS PER $ FEED FED		$1.93
PER COW INFORMATION	TOTAL	COW
PRODUCTIVE MAN WORK UNITS	524	9.02
VALUE OF LABOR USED	$11,772	$202
VALUE OF PRODUCTION		
DAIRY INCREASE	$7,140	$122
MILK SOLD	$43,505	$748.79
TOTAL	$50,645	$871
EXPENSES		
CASH		
FEED PURCHASED	$6,300	$108.62
HIRED LABOR	$3,050	$52.58
FARM SUPPLIES	$750	$12.93
MACHINE REPAIRS	$530	$9.13
BUILD FENCE ETC	$940	$16.20
FUEL OIL & GRSE	$750	$12.93
UTILITIES	$725	$12.50
MISC EXPENSE	$150	$2.58
MACHINE HIRED TRK	$65	$1.12
AUTO EXPENSE	$150	$2.58
INTEREST ON NOTES	$2,010	$34.65
VET MEDICINE	$810	$13.96
BREEDING FEES	$550	$9.48
TAXES	$650	$11.20
INSURANCE	$650	$11.20
TOTAL CASH	$18,080	$311.72

OHIO STATE UNIVERSITY
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FARM BUSINESS ANALYSIS

DATA YEAR 1972
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COUNTY NO 40 FULL OWNER

*** DAIRY SUMMARY ***

	THIS YEAR * * * * * * * * * * 1972 * * * * * * * * * *	
DEPRECIATION		
BLDG FENCE TILE	$1,360	$23.44
MACHINERY & EQUIP	$1,638	$28.24
TOTAL DEPRECIATION	$2,998	$51.68
UNPAID OPR. AND FAM. LABOR	$8,722	$150
INTEREST NOT CHARGED	$2,310	$39
HOME GROWN FEEDS	$19,872	$342
TOTAL EXPENSES	$51,982	$894
MANAGEMENT INCOME AND PROFIT	$1,337-	$23-
VALUE OF PRODUCTION - CASH EXPENSES	$32,565	$560
TOTAL INVESTMENT	$72,000	$1,239
RETURN ON INVESTMENT	$2,983	$51.34
PERCENT RETURN ON INVESTMENT	4.1 %	4.1 %
TOTAL FEED COSTS	$26,172	$450
FEED REQUIRED		
POUNDS OF SUPPLEMENT	76,200	1,311.53
POUNDS OF GRAIN	406,832	7,002.27
POUNDS OF ROUGHAGES - HAY EQUIVALENT	775,500	13,347.67
VALUE OF SUPPLEMENT	$5,325	$91.65
VALUE OF GRAIN	$9,103	$156.68
VALUE OF ROUGHAGES	$11,743	$202.12
RETURN TO UNPAID OPERATOR AND FAMILY LABOR, MANAGEMENT AND PROFIT	$7,385	HOUR $2.47

OHIO STATE UNIVERSITY
DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY
FARM BUSINESS ANALYSIS

DATA YEAR 1972
FARM NO 994
AREA NO 10
COUNTY NO 40 FULL OWNER

**** MILK SUMMARY ****

THIS YEAR
* * * * * * * * * * 1972 * * * * * * * * * *

GENERAL INFORMATION

NUMBER OF COWS	58
POUNDS OF 3.5 MILK SOLD	758,238
POUNDS OF 3.5 MILK SOLD PER COW	13,050
POUNDS OF MILK SOLD PER MAN EQUIVALENT	505,256
VALUE OF MILK SOLD PER COW	$748
FEED COSTS FOR MILK PER COW	$386
MILK SALES AS A % OF GROSS FARM INCOME	62.2 %
MILK SALES AS A % OF DAIRY VALUE	85.9 %
PERCENT OF DAIRY FEED CHARGED TO MILK PRODUCTION	85.9 %

PER CWT OF MILK PRODUCED	TOTAL	CWT
PRODUCTIVE MAN WORK UNITS	450	.05
VALUE OF LABOR USED	$10,112	$1.33
VALUE OF MILK SOLD	$43,505	$5.73
EXPENSES		
CASH		
FEED PURCHASED	$5,411	$.71
HIRED LABOR	$2,619	$.34
FARM SUPPLIES	$644	$.08
MACHINE REPAIRS	$455	$.06
BUILD FENCE ETC	$807	$.10
FUEL OIL & GRSE	$644	$.08
UTILITIES	$622	$.08
MISC EXPENSE	$128	$.01
MACHINE HIRED TRK	$55	
AUTO EXPENSE	$128	$.01
INTEREST ON NOTES	$1,726	$.22
VET MEDICINE	$695	$.09
BREEDING FEES	$472	$.06
TAXES	$558	$.07
INSURANCE	$558	$.07
TOTAL CASH	$15,522	$2.04

OHIO STATE UNIVERSITY
DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY
FARM BUSINESS ANALYSIS

DATA YEAR 1972
FARM NO 994
AREA NO 10
COUNTY NO 40 FULL OWNER

**** MILK SUMMARY ****

	THIS YEAR 1972	
DEPRECIATION		
BLDG FENCE TILE	$1,168	$.15
MACHINERY & EQUIP	$1,407	$.18
TOTAL DEPRECIATION	$2,575	$.33
UNPAID OPR. AND FAM. LABOR	$7,492	$.98
INTEREST NOT CHARGED	$1,984	$.26
HOME GROWN FEEDS	$17,070	$2.25
TOTAL EXPENSES	$44,652	$5.88
MANAGEMENT INCOME AND PROFIT	$1,148-	$.15-
VALUE OF PRODUCTION - CASH EXPENSES	$27,973	$3.68
TOTAL INVESTMENT	$61,848	$8.15
RETURN ON INVESTMENT	$2,562	$.33
PERCENT RETURN ON INVESTMENT	4.1 %	4.1 %
TOTAL FEED COSTS	$22,481	$2.96
FEED REQUIRED		
POUNDS OF SUPPLEMENT	65,455	8.63
POUNDS OF GRAIN	349,468	46.08
POUNDS OF ROUGHAGES - HAY EQUIVALENT	666,154	87.85
VALUE OF SUPPLEMENT	$4,574	$.60
VALUE OF GRAIN	$7,819	$1.03
VALUE OF ROUGHAGES	$10,087	$1.33
RETURN TO UNPAID OPERATOR AND FAMILY LABOR, MANAGEMENT AND PROFIT	$6,343	HOUR $2.47

OHIO STATE UNIVERSITY
DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY
FARM BUSINESS ANALYSIS

DATA YEAR 1972
FARM NO 994
AREA NO 10
COUNTY NO 40

FULL OWNER

THIS YEAR

*** RATIO ANALYSIS *** * * * * * * * * * 1972 * * * * * * * * * *

ENTERPRISE	MANAGEMENT INCOME AND PROFIT + PAID AND UNPAID INTEREST / GROSS INCOME		GROSS INCOME / TOTAL INVESTMENT		MANAGEMENT INCOME AND PROFIT + PAID AND UNPAID INTEREST / TOTAL INVESTMENT
	PROFIT MARGIN		TURNOVER		RETURN ON INVESTMENT
OVERALL FARM	.3180	X	.4645	=	.1477
DAIRY	.0589	X	.7034	=	.0414
MILK	.0589	X	.7034	=	.0414
ALL CROPS	.3329	X	.3792	=	.1262
CORN	.3669	X	.4305	=	.1579

Studies in Agricultural
Capital and Technology

Economics and Sociology
Occasional Paper No. 49

Farm Business Analysis Summary
A Guide to Interpretation of the Computer Printout

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Revised
December, 1972

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FARM BUSINESS ANALYSIS SUMMARY

A GUIDE TO INTERPRETATION OF THE COMPUTER PRINTOUT

Introduction

This manual is to be used by those persons wanting to develop a better understanding of the computer print-out for the Ohio State University Farm Business Analysis program. The method of calculating each figure is presented as well as a short explanation of what it means. Standards are presented where they are available to help indicate whether the value calculated is good, poor, or about average for a particular farm.

Very few farmers will find it necessary or want to read this manual in its entirety. Calculations for the total Farm Analysis are presented on the first pages of the computer print-out. These explanations which are found in the first half of the manual apply to all farms. The remainder of the manual is devoted to explaining calculations in the various crop and livestock enterprise sections. An individual will find it necessary to read only the explanation for those calculations which are not clear in either the total farm analysis or his particular enterprise section.

Calculations are explained for each item of information. For example, the method of calculating Gross Income per $1,000 invested is discussed as well as desirable standards (i.e., figures which indicate what other farmers are doing) for different type farms. All other calculations are similarly explained and desirable standards are provided when they are available.

The first pages of the computer print-out provide an analysis of the TOTAL farm business. In addition, if sufficient information has been provided, one or more enterprise analyses is presented.

When looking at the analysis, the individual farmer, farm manager, lender, etc. can determine the profitability of the business, how efficiently resources were used, strong and weak points in the operation, and growth or progress of the business over time.

FINANCIAL HIGHLIGHTS

Page one (the business highlights) presents a summary of the entire business. All calculations appearing on this page are repeated on various pages of the report but are pulled together here in order to allow the farmer or someone working with the farmer to analyze the business quickly.

To put a business analysis in its proper perspective, we must first understand the goals of the farm business. It is assumed throughout the analysis that the primary goal of the farm business is to maximize profits.

In order to maximize profit, a business must first operate with a profit margin. Profit margin is the amount of profit compared to total receipts. For example, if a farmer can raise a hog for $30.00 and sell it for $40.00, he has a profit margin of 10/40 or .25¢ for each dollar of hog sold. Second, the business must produce or "turnover" as many of these profit items as practical for the money you have invested. For example, a farmer that is able to produce hogs for 10¢ a pound and sell them for 20¢ a pound has a high profit margin. However, if his turnover is low and he sells only 25 hogs per year from an investment of $5,000, he does not make very much profit. Likewise, a farmer that produces 5,000 hogs per year, but has such high building and equipment costs that he makes only 10¢ on each hog he sells, will not make very much profit.

Doing a good job of only one or the other of these two areas of management is not enough. To maximize profit, a manager must consider both profit per unit sold and number of units sold for each unit of asset. These two areas of management are analyzed with the following formula or ratios.

$$\frac{\text{profit + interest expense}}{\text{gross farm income}} \times \frac{\text{gross farm income}}{\text{total investment}} = \frac{\text{profit + interest expense}}{\text{total investment}}$$

(profit margin) (turnover) (returns on investment)

These ratios for the total farm and for each enterprise analyzed are listed on the ratio analysis summary page, the last page of the computer print-out. Comparison of the various enterprises on the farm can easily be made by comparing the ratios on this page. A good manager wants to keep these ratios as large as possible, while maintaining a sound business. In order to be of help, each of these ratios must be compared to another year on the same operation, to state averages, or some other comparison. If any of the ratios are not as large as they should be, each of them can be analyzed in greater detail.

Profit margin is composed of receipts and expenses. Receipts can be examined by looking at bushels per acre, pounds of milk per cow, pigs per litter, or other production coefficients provided in this analysis. Expenses can be examined by looking at overhead costs and variable costs. These are presented on the farm summary page as a percent of gross income. These ratios can be compared to previous years or state averages to see if either variable costs or overhead costs are out of line. Beyond this, individual expense items can be examined such as feed cost per cwt. milk or machine cost per cwt. swine produced. Again, these may be compared to previous years or to state summaries.

The rate at which your investment is "turned over" can also be analyzed in greater detail. The turnover ratio is made up of receipts and investments. Receipts can be examined the same as in the analysis of profit margin. Investments can be broken down into fixed assets and current assets or further broken down into individual categories such as machinery, land, livestock,

feed, etc. Since the amount of any individual category of investment used in any one enterprise (such as machinery used in the corn enterprise) is not reported, only an overall analysis of investment for each enterprise is conducted in the summary. The turnover ratio for each enterprise can be a good indicator when compared to previous years or to state averages.

The overall farm summary gives a combined analysis of your farm operation. This may tell you that things are going right or wrong, but it will not tell you where things are right or wrong. In order to find where the strong points and the weak points of your business are, you must request a detailed analysis of each of your enterprises. The information you receive through the farm records analysis can only be as accurate as the information you put in. It is therefore very important to keep accurate records of your farm operation.

Print-Out Values and Method of Calculation

TOTAL FARM SUMMARY

INCOME

CASH RECEIPTS: Individual receipt account totals are reprinted on page 2 of the computer printout from the input form, Form 7363, and totaled. The total is listed on page 1 of the printout.

CAPITAL GAINS AND/OR LOSSES: The net sales value of Raised Breeding Animals plus any gain on the sale of Purchased Breeding Animals plus gains on the sale of Machinery and Equipment less the loss on the sale of Purchased Breeding Animals, less the loss on the sale of Machinery and Equipment provide this value. These amounts are taken directly from the 7363 form.

INVENTORY CHANGES: Subtract beginning from closing inventory to obtain net gain or loss for each item. Items to be included are Raised Breeding Livestock, Market Livestock, Grain, Hay, Supplement, Supplies, and Fertilizer. These amounts are taken directly from the 7363. This value indicates the total net increase or decrease in value of inventory items.

FEEDER LIVESTOCK: Feeder livestock purchases are subtracted from gross income to reflect actual farm production.

GROSS FARM INCOME: Cash Receipts are adjusted for inventory changes and capital gains or losses. Cash Receipts plus changes in (Raised Breeding Livestock, Market Livestock, Grain, Hay, Supplement, Supplies, and Fertilizer Inventories) + capital gains or losses for Raised and Purchased Breeding Livestock, Machinery and Equipment - Feeder Livestock purchases gives this figure. The necessary preliminary calculations have been performed in the above preceding steps.

EXPENSES

CASH EXPENSES: Individual expense account totals are reprinted from the input form, Form 7363, and totaled.

DEPRECIATION: Depreciation amounts listed on the 7363 are totaled. Items to be included are buildings, fence and tile, machinery and equipment, and Purchased Breeding Livestock.

INTEREST NOT CHARGED: Found by multiplying TOTAL INVESTMENT by 6 percent and subtracting PAID INTEREST EXPENSE (from page 1, column 2 of the input form). This value represents the money which could be earned on equity capital if invested elsewhere.

UNPAID OPERATOR AND FAMILY LABOR: Found by multiplying the number of hours reported on the input form for each unpaid operator and family member by the reported value per hour for that operator or family member and summing these values.

FEEDER LIVESTOCK: Feeder livestock purchases are subtracted here to compensate for the subtraction of feeder livestock from GROSS FARM INCOME.

TOTAL FARM EXPENSE: CASH EXPENSES + DEPRECIATION + INTEREST NOT CHARGED + UNPAID OPERATOR AND FAMILY LABOR - FEEDER LIVESTOCK PURCHASES provide this value.

MANAGEMENT INCOME AND PROFIT: TOTAL FARM EXPENSE is subtracted from GROSS FARM INCOME to obtain this value.

MANAGEMENT INCOME AND PROFIT AS A PERCENT OF GROSS FARM INCOME: MANAGEMENT INCOME AND PROFIT divided by GROSS FARM INCOME provides this value.

UNPAID OPERATOR AND FAMILY LABOR AS A PERCENT OF GROSS INCOME: UNPAID OPERATOR AND FAMILY LABOR divided by GROSS FARM INCOME provides this value.

OVERHEAD COSTS: This is the sum of all depreciation items plus Building Repairs, Interest, Taxes, Cash Rent, Insurance, and Interest Not Charged. Note that this figure includes a charge for interest on owned capital. These costs are essentially fixed and must be paid whether much or little is produced.

OVERHEAD COSTS AS A PERCENT OF GROSS INCOME: OVERHEAD COSTS are divided by GROSS FARM INCOME. This value indicates how much of each dollar of gross income is used to pay Overhead Expenses. If these expenditures for taxes, depreciation, insurance and interest are too large or too great per unit produced, it is difficult to have a profitable farming operation.

Burden of Overhead Differs With Types of Farms

Overhead expense as a percent of
Gross Income for owner-operator farms

		Poor	Better	Good
Dairy		40	34	29
Swine		40	33	26
General Crop -	Owner	55	45	34
	Tenant	32	25	19
Beef Feeding		45	40	33
Poultry		25	15	11

These standards will vary by ownership classification also. For example, the above values are for an owner-operator. Corresponding values for a tenant operation would be substantially less for all farm types such as general crops described above. Values for a part-owner, part-tenant would fall between these two.

VARIABLE COST: This is the sum of the expense items on the 7363 not designated as fixed. They are Hired Labor, Feed Purchased, Farm Supplies, Machinery Repairs, Fuel, Oil, and Grease, Utilities, Drying and Storage, Miscellaneous, Seeds and Plants, Fertilizer and Lime, Machine Hire and Trucking, Auto Expenses, Veterinary and Medicine, Breeding Fees and Registration. These costs vary with production.

VARIABLE COST AS A PERCENT OF GROSS INCOME: VARIABLE COST is divided by GROSS FARM INCOME. This value indicates how much of your receipts are used to pay variable expenses. For an owner-operator with livestock this should be 40-50 percent except hogs which should be in the 50 percent range. For a general crop farm this percent should be in the 30-40 percent range.

NET CASH INCOME: This is calculated by deducting the CASH EXPENSES from CASH RECEIPTS.

NET FARM INCOME: GROSS FARM INCOME - CASH EXPENSES - DEPRECIATION + Feeder Livestock Purchases provides this figure. Since Breeding Livestock Sales is deducted in the Gross Income Computation, it must be added to Net Farm Income.

TOTAL INVESTMENT: Average values for the year for Investment and Inventory items are totaled to determine Total Capital Investment in the farm business. Add the Beginning and Closing Investment and Inventory figures (from the 7363) and divide by 2 to find average inventory values. Items to be included are Purchased Breeding Livestock, Raised Breeding Livestock, Market Livestock, Grain, Hay, Supplement, Supplies and Fertilizer, Machinery and Equipment, Buildings, Fence, Tile, and the Current Agricultural Value of Land.

RETURN TO INVESTMENT: MANAGEMENT INCOME AND PROFIT plus PAID INTEREST EXPENSE plus INTEREST NOT CHARGED provides this value.

PERCENT RETURN ON INVESTMENT: RETURN TO INVESTMENT is divided by TOTAL INVESTMENT to calculate this figure. Here the residual income (i.e., the income left after deducting all expenses except interest) is designated as a percent return on investment. A zero return for management is assumed.

GROSS INCOME PER $1,000 INVESTED: Gross Farm Income is divided by TOTAL INVESTMENT x $1,000. This value indicates the rate at which capital is turned over on the farm. How well are you using your capital? Does it work for you on more than one "shift"?

Desirable Rates of Turnover Will Differ by Type of Farming

Gross Income Per $1,000 Invested
Owner-Operator Farms

	Poor	Better	Good
Dairy	300	400	500
Swine	300	400	450
General Crop - Owner	200	300	400
Tenant	700	850	1000
Beef Feeding	200	275	350
Poultry	600	800	1000

LABOR EFFICIENCY FACTOR: The LABOR EFFICIENCY FACTOR is computed by dividing the labor used on the farm (taken from page 1 of form 7363) by the amount that would have been used if work had been done at the standard efficiency rate. (See page 10 of this pamphlet for further explanation.)

RETURN TO UNPAID OPERATOR AND FAMILY LABOR, MANAGEMENT AND PROFIT: This is calculated by adding UNPAID OPERATOR AND FAMILY LABOR TO MANAGEMENT INCOME AND PROFIT. The per hour figure is calculated by dividing the MAN-EQUIVALENT HOURS WORKED BY UNPAID OPERATOR AND FAMILY into RETURN TO UNPAID OPERATOR AND FAMILY LABOR, MANAGEMENT AND PROFIT. MAN-EQUIVALENT HOURS WORKED BY UNPAID OPERATOR AND FAMILY is computed by subtracting Hours of Hired Labor (from page 1 of form 7363) from NUMBER OF MAN-EQUIVALENT HOURS USED (see page 9 for explanation of this calculation.)

CASH RECEIPTS: All receipt items entered on form 7363 are listed here.

TOTAL CASH RECEIPTS: The sum of all cash receipt items.

CASH EXPENSES: All expense items entered on page 1 of form 7363 are copied over here.

TOTAL CASH EXPENSES: The sum of all cash expense items.

CAPITAL GAIN: These entries are copied from page 1 of form 7363.

TOTAL CAPITAL GAIN OR LOSS: The sum of the capital losses are subtracted from the sum of the capital gains to find this figure.

NET INVENTORY CHANGE: The difference between beginning and closing inventories for Raised Breeding Livestock, Market Livestock, Grain, Hay, and Supplement, and Supplies and Fertilizer is found and entered here as either a gain or a loss.

TOTAL INVENTORY CHANGE: The sum of the inventory losses are subtracted from the sum of the inventory gains to find this total.

DEPRECIATION: The entries on form 7363 under depreciation are listed here.

TOTAL DEPRECIATION: The sum of all depreciation entries.

CAPITAL INVESTMENT: The beginning inventory and closing inventory items from page 1 of form 7363 are added together and divided by 2 to find the capital investment in each of the categories.

TOTAL CAPITAL INVESTMENT: The CAPITAL INVESTMENT items are added together to find this total.

RATIO ANALYSIS OF FARM AND ENTERPRISES

The overall farm and each of the enterprises are analyzed by ratios to determine profit margin, turnover of assets, and returns on investment. Each of the ratio calculations is explained below along with a brief explanation of how the ratio may be used.

A. MANAGEMENT INCOME AND PROFIT + INTEREST/GROSS INCOME (PROFIT MARGIN): The MANAGEMENT INCOME AND PROFIT figure + PAID INTEREST + INTEREST NOT CHARGED from the farm or enterprise in question is divided by the appropriate GROSS INCOME FIGURE (GROSS FARM INCOME, VALUE OF ALL CROPS, or VALUE OF ANY ENTERPRISE). This ratio shows how much profit and interest is made on each dollar of sales.

B. GROSS INCOME/TOTAL INVESTMENT (TURNOVER): The appropriate GROSS INCOME figure described above is divided by your reported TOTAL INVESTMENT for the farm or appropriate enterprise (from page 1 or 3 of form 7363). This ratio will tell you how many dollars of sales are generated from each dollar of assets you have in the farm or a particular enterprise.

C. MANAGEMENT INCOME AND PROFIT + INTEREST/TOTAL INVESTMENT (RETURN ON INVESTMENT): MANAGEMENT INCOME AND PROFIT + PAID INTEREST + INTEREST NOT CHARGED for the enterprise or overall farm is divided by the amount of Total Investment you have in that enterprise or overall farm. This ratio can also be found by multiplying the ratio described in A above by the ratio described in B above. This ratio tells how much profit and interest is generated for each dollar you have invested (owned plus borrowed capital).

These ratios don't mean much by themselves, but when you compare them with previous years of the same farm or enterprise, with state averages, and particularly with each other, you can see how your enterprise is doing in comparison with others on your farm at present, on your farm in the past, and on other farms in the state.

LABOR EFFICIENCY

REPORTED LABOR USED ON FARM: Each of these entries is copied over from page 1 of form 7363.

NUMBER OF MAN-EQUIVALENT HOURS USED: Hours of operator labor + .8 times the number of hours of unpaid labor done by wife and family over 14 + .5 times hours of unpaid family labor under 14 + hours of hired labor. All the hour figures used in this calculation are from page 1 of form 7363.

NUMBER OF PMWU USED: PMWU is the abbreviation for Productive Man Work Unit and represents one 10 hour day. It is calculated by dividing the number of MAN-EQUIVALENT HOURS USED by 10.

NUMBER OF MAN-YEAR EQUIVALENTS USED: Number of PMWU used divided by 300.

VALUE OF OPERATOR LABOR USED: Hours of Operator Labor used (from page 1 of form 7363) times reported value per hour.

VALUE OF UNPAID FAMILY LABOR USED: Hours of reported unpaid wife labor times reported value per hour + hours of unpaid family labor over 14 times reported value per hour + hours of unpaid family labor under 14 times value per hour. All these value and hour figures are from page 1 of form 7363.

VALUE OF HIRED LABOR USED: This figure is copied from page 1 of form 7363.

VALUE OF TOTAL LABOR: VALUE OF OPERATOR LABOR USED + VALUE OF UNPAID FAMILY LABOR USED + VALUE OF HIRED LABOR USED.

VALUE OF LABOR PER MAN HOUR EQUIVALENT: VALUE OF TOTAL LABOR divided by NUMBER OF MAN-EQUIVALENT HOURS USED.

VALUE OF LABOR PER PMWU: VALUE OF TOTAL LABOR divided by NUMBER OF PMWU USED.

VALUE OF LABOR PER MAN-YEAR EQUIVALENT: VALUE OF TOTAL LABOR divided by NUMBER OF MAN-YEAR EQUIVALENTS USED.

PRODUCTIVE MAN WORK UNITS CHART: This chart explains the number of work units used on each enterprise on your farm.

ITEM: Under this heading are printed the enterprise categories analyzed on your farm.

STANDARD PMWU: (Per Unit Standard) - For each enterprise, a standard number of Productive Man Work Units per acre or unit of livestock is available (see pages 11 and 12). This standard is listed here along with the total hours that would have been used by each enterprise if standards are used.

Total Standard Hours - For each enterprise, the enterprise standard is multiplied by the number of units in the enterprise. This gives the number of PMWU that would have been used in the enterprise if labor was of standard efficiency.

Labor Efficiency Factor: The total standard PMWU for all enterprises are added together and the total is compared to the total number of hours that were reported used on page 1 of form 7363. From this comparison is developed the Labor Efficiency Factor.

$$\text{Labor Efficiency Factor} = \frac{\text{Standard PMWU x Number of Units}}{\text{Reported PMWU on page 1}}$$

If you were able to care for more units per hour than the standard, this factor will be larger than 1. For example, if you reported 1,000 hours used and the standard PMWU x Number of Units sums to 1,250 hours, the labor efficiency factor will be 1.25.

Standard Labor Adjustment Factor: This is the reciprocal of the labor efficiency factor, (i.e., 1 divided by the Labor Efficiency Factor). For the above example, it is 1 divided by 1.25 = .80.

Adjusted Standard PMWU: The total and per unit figures for each enterprise are obtained by multiplying the standard PMWU for each enterprise by the Standard Labor Adjustment Factor. This will change all the standard figures to fit your particular farm operation. For example, if you actually used less hours than the standard indicates, the standards are decreased to represent your farm situation. This adjusted figure is used in all labor efficiency and labor cost calculations for operations that did not report their own labor figures in column 3 of page 2 and page 4.

Individual PMWU: If you reported your own labor figures in column 3 of page 2 and page 4, these figures are listed under this heading. The total figures are found by multiplying the PMWU listed per unit by the number of units in the enterprise. If an entry in column 3 of page 2 or page 4 is omitted from a particular enterprise, no labor will be allocated to that enterprise.

Individual Labor Adjustment Factor: The total individual PMWU from each enterprise are added up and compared to the number of hours actually used as reported on page 1 of form 7363. The Individual Labor Adjustment Factor is a result of this comparison.

$$\text{Individual Labor Adjustment Factor} = \frac{\text{Hours reported used on page 1}}{\text{Reported Individual Labor Factors x number of units}}$$

Adjusted Individual PMWU: The unit and the total figures are found by multiplying your Individual PMWU by the Individual Labor Adjustment Factor. This will correct your reported labor factors to account for the labor you reported used on page 1 of form 7363. This adjusted figure will be used in all labor efficiency and labor cost calculations.

CROP CODES AND STANDARD LABOR REQUIREMENTS

(PMWU standards for each enterprise equals Number of acres times hours per acre listed below divided by 10.)

Code	Crop	Hours per Acre	Code	Crop	Hours per Acre
00	All Crops	Does not apply	28	Grapes	240
01	Corn	5	29	Sweet Corn	20
02	Soybeans	4	30	Tobacco	300
03	Oats	2	31	Sugar Beets	22
04	Wheat	4	32	Tomatoes	220
05	Barley	4	33	Pickles	100
06	Grain Sorghum	5	34	Popcorn	50
09	Other Grain	5	35	Apples	50
10	Alfalfa Hay	9	36	Peaches	50
11	Clover,Mixed Hay	9	37	Strawberries	250
12	Dehydrated Alfalfa	2	38	Other Fruit	50
17	Green Chop	5	39	Other Vegetable	20
18	Other Hay	9	40	Rotation Pasture*	2
19	Haylage	5	42	Permanent Pasture**	1
20	Direct Cut Grass Silage	5	44	Diverted Acres	2
			45	Other Special Crop	10
21	Corn Silage	8			
22	Other Silage	7	46	_____ (List)	10
23	Seed Corn	12	47	_____	10
24	Seed Soybeans	7	48	_____	10
25	Seed Wheat	7	49	_____	10
26	Cabbage	7	50	_____	10
27	Potatoes	5			

LIVESTOCK STANDARD LABOR REQUIREMENTS

(PMWU standards for each type of animal equals number of animal units times hours per animal unit listed below divided by 10.)

Animal Unit	Average Number of Hours Per Year For Each Unit
Dairy Cow	60.0
Replacement Heifer-Dairy	15.0
Litter-Farrow to weaning	7.0
Market Hog-Weaning to Market-Per 1,000 pounds of gain	7.2
Boar	3.0
Beef Cow	12.0
Beef Bull	20.0
Replacement Heifer-Beef	10.0

LIVESTOCK CODES AND STANDARD LABOR REQUIREMENTS
(Continued)

Animal Unit	Average Number of Hours Per Year For Each Unit
Beef Feeder-Per 1,000 pounds of gain	10.0
Poultry-Per 1,000 Laying Hens	150.0
Ewes and Lamb-to weaning	6.0
Lambs-Per 100 pounds gain	4.0
Dairy Bull	20.0
Turkeys-Per 1,000 pounds sold	4.3
Broilers-Per 1,000 pounds sold	2.8

For farms in which the livestock is not entirely owned by the operator (or person for which the analysis is submitted), PMWU for livestock are increased so that all livestock labor on the farm was provided by the operator. This calculation is made by multiplying standard PMWU (or if available individual PMWU) for each type of livestock times (one divided by the portion of livestock ownership). For example, if the operator share of livestock is 50%, PMWU's for each type of livestock are multiplied by 2. If operator share is 75%, PMWU are multiplied by 1.33.

A. CROP PRODUCTION: All entries under the column acres are copied from page 2, Column 4, of form 7363. Yield is calculated by dividing total production for each enterprise (from column 5, page 2 of form 7363) by the number of acres of that enterprise. These include all crops except pasture, diverted acres and woodland.

B. GENERAL CROP ACRES: This is calculated by adding the total acres of each general crop produced. General crops are coded 01 through 22 and when entered in rows J or M of page 2, form 7363, codes 46 through 50.

C. SPECIAL CROP ACRES: This is calculated by adding the total acres of each special crop produced (those coded 23 through 39 and when entered in rows P, Q, R and S of page 2, form 7363, codes 45, and 47 through 50). This excludes those crops designated as general crops (those with codes between 01 and 22).

D. TOTAL HARVESTED CROP ACRES: This is calculated by adding the total acres of each crop produced. All crops coded from 01 through 39 and 44 through 50 are included. Rotation Pasture and Permanent Pasture are excluded.

E. VALUE OF GENERAL CROPS: The total production in bushels or tons (from column 6, page 2 of form 7363) of each general crop is multiplied by the price per bushel or ton (from column 2, page 2 of form 7363) for each general crop as described in B above.

F. VALUE OF SPECIAL CROPS: The dollars of total production for each of the special crops (from column 5 page 2 of form 7363) are added together to find this figure. Pasture, General Crops, diverted acres, and woodland are omitted from this calculation.

G. VALUE OF ALL CROPS: This figure is found by adding VALUE OF GENERAL CROPS plus VALUE OF SPECIAL CROPS plus Government Crop Payments (from column 1 page 1 of form 7363). Pasture has been excluded from this figure.

H. GENERAL CROP PRODUCTION VALUE PER ACRE: This figure is found by dividing VALUE OF GENERAL CROPS by GENERAL CROP ACRES.

I. SPECIAL CROP PRODUCTION VALUE PER ACRE: This calculation is done by dividing VALUE OF SPECIAL CROPS by SPECIAL CROP ACRES.

J. ALL CROP PRODUCTION VALUE PER ACRE: This is found by dividing VALUE OF ALL CROPS by TOTAL HARVESTED CROP ACRES.

K. DIVERTED ACRES: This figure is copied directly from Column 4, row T, page 2 of form 7363.

L. CROP ACRES PAYMENT: This value is copied directly from column 1, row N, page 1 of form 7363.

M. PERCENT OF GENERAL CROPS IN CORN AND SOYBEANS: This figure is calculated by dividing the sum of Total Acres of Corn + Total Acres of Corn Silage + Total Acres of Soybeans (from column 4 page 2 of form 7363) by GENERAL CROP ACRES.

N. PERCENT TOTAL TILLABLE ACRES IN CORN AND SOYBEANS: This figure is found by dividing the sum of Total Acres of Corn + Total Acres of Corn Silage + Total Acres of Soybeans (from column 4 page 2 of form 7363) by TOTAL TILLABLE ACRES. TOTAL TILLABLE ACRES is found by adding TOTAL HARVESTED CROP ACRES + Acres of Rotation Pasture (from column 4 page 2 of form 7363).

O. FERTILIZER AND LIME COST PER ACRE: (This includes all tillable and permanent pasture acreage). This value is calculated by dividing the Fertilizer and Lime Expense figure (from page 1 of form 7363) by the sum of TOTAL HARVESTED CROP ACRES + Rotation Pasture acreage (taken from page 2 of form 7363) + Permanent Pasture acreage (taken from page 2 of form 7363) - DIVERTED ACRES. This value should generally be higher on farms having a high percentage of tillable acres because pasture receives much lower applications of fertilizers. (Diverted Acres excluded).

P. MACHINERY INVESTMENT PER CROP ACRE: This figure is found by dividing AVERAGE INVESTMENT IN MACHINERY by TOTAL TILLABLE ACRES (see N. above). AVERAGE INVESTMENT IN MACHINERY is found by adding Beginning and Ending Machinery and Equipment Inventory (from page 1 of form 7363) and dividing by 2.

Q. TOTAL POWER AND MACHINERY COST: This is calculated by summing the Expense Items from page 1 of form 7363 of Machinery Repairs, Fuel, Oil, Grease, Machine Hire and Trucking, and Auto Expense, plus Machinery and Equipment Depreciation + 6% of AVERAGE INVESTMENT IN MACHINERY (see calculation P above) - Custom Work Receipts (from column 1 page 1 of form 7363). Custom Work Receipts are deducted to remove those cost items which were not incurred by the farm business.

R. MACHINERY COST PER CROP ACRE: This figure is found by dividing TOTAL POWER AND MACHINERY COST by TOTAL TILLABLE ACRES.

S. TOTAL VALUE OF FEED FED TO ALL LIVESTOCK ENTERPRISES: This figure is found by multiplying the bushels, tons, or acres of each type of home grown feed fed to livestock (from column 10 page 2 of form 7363) by the value of that feed per bushel, ton or acre and then adding these home grown feed values to the value of purchased feeds (from page 2 of form 7363).

Standard Prices

If no value per bushel or ton is entered in column 2, page 2 of form 7363, the standard value listed below will be used.

		Cash grain farms[1]	Livestock farms[2]
01	Corn	1.35	1.17
02	Soybeans	3.62	3.31
03	Oats	.71	.77
04	Wheat	1.40	1.63
05	Barley	.90	.96
06	Grain Sorghum	2.40 cwt	2.03
09	Other Grain	1.00	1.00
10	Alfalfa Hay		31.00
11	Clover, Mixed Hay		25.00
17	Green Chop		6.20
18	Other Hay		25.00
19	Haylage		20.50
20	Direct Cut Grass Silage		7.75
21	Corn Silage		9.50 [3]
22	Other Silage		3.50 [3]
40	Rotation Pasture		15.00 [4]
42	Permanent Pasture		10.00 [4]

T. VALUE OF NET LIVESTOCK INCREASE: This value is calculated by summing the receipts of milk and cream, poultry and eggs, wool, other livestock products, and breeding fees received from page 1 of the 7363. To this is added the difference between (Ending Inventory value + Sales value) - (Beginning Inventory value + Purchases value) for all livestock enterprises from page 4 of form 7363. The resulting value represents the total dollars of livestock and livestock products produced during the year.

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[1] Average price at time of harvest.

[2] Average yearly price.

[3] Price based on price of corn.

[4] Price based on price of alfalfa hay.

U. RETURNS PER $ FEED FED TO ALL LIVESTOCK ENTERPRISES: This is calculated by dividing VALUE OF NET LIVESTOCK INCREASE by TOTAL VALUE OF FEED FED TO ALL LIVESTOCK ENTERPRISES. Returns per dollar of feed fed should pay for the feed, labor, and other variable expenses, overhead expenses and provide for a profit. Some livestock enterprises require more costly buildings and equipment and involve more labor than others. When arriving at standards for a particular farm, consider the portion of feed that was consumed on the farm by each class of livestock. For example, if half of the feed went to dairy cattle and half to hogs, the expected standard return should be about half-way between $2.10 and $1.70 or $1.90.

The necessary return will vary as costs of feed and labor fluctuate.

Desirable Returns Per $1.00 of Feed Fed Varies By Type of Enterprise

Dairy Cattle	$2.10	Hogs	$1.70
Beef Breeding Cattle	1.90	Sheep	1.50
Fattening Cattle	1.90	Poultry	1.95

CROP SUMMARIES

The following calculation are the same for each of the crop analyses, except the analysis of ALL CROPS (Coded 00). These different calculations are explained on pages 17 and 18.

ACRE INFORMATION

The total for each of the calculations is described below. The per acre calculations are found by dividing the total by the number of acres of that crop as listed in column 4, page 2 of form 7363.

A. ___X___ PRODUCED: This figure (in bushels, tons, or dollars) is copied directly from column 5 page 2 of form 7363. This is not listed for ALL CROPS analysis (code 00).

B. POUNDS PRODUCED: ___X___ PRODUCED is multiplied by the number of pounds per bushel or by 2,000 if in tons. Pasture and special crops will not have a value for this calculation. This is not listed for ALL CROPS analysis (code 00).

C. PRODUCTIVE MAN WORK UNITS: ADJUSTED STANDARD PMWU or ADJUSTED INDIVIDUAL PMWU per acre (see page 10 for explanation) is listed. Total is found by multiplying the number of acres of the crop as reported in column 4, page 2 of form 7363 by PMWU per acre.

D. VALUE OF LABOR USED: This value is found by multiplying PRODUCTIVE MAN WORK UNITS used in the enterprise by VALUE OF LABOR PER PMWU (explained on page 9).

E. VALUE OF PRODUCTION: This value is found by multiplying operators share of the bushels or tons produced in the enterprise (from column 6, page 2 of form 7363) by the value per bushel or ton (as entered in column 2, page 2 of form 7363 or a standard). For pasture this value will be the product of Pasture Acres Used (column 4, page 2 of form 7363) x Value Per Acre (under column 9, page 2 of form 7363). For Special Crops, this value will be copied over from column 5, page 2 of form 7363. For Diverted Acres, it will be copied directly from Government Crop Payments (Row N, Column 1, page 1 of form 7363).

Expenses

F. CASH: These values are copied over from page 3 of form 7363.

G. TOTAL CASH EXPENSES: The sum of all cash expenses.

H. DEPRECIATION: These values are copied over from page 3 of form 7363.

I. TOTAL DEPRECIATION: The sum of all depreciation expense items.

J. UNPAID OPERATOR AND FAMILY LABOR: VALUE OF LABOR USED minus HIRED LABOR EXPENSE gives this figure.

K. INTEREST NOT CHARGED: This figure is found by multiplying Investment (from page 3 of form 7363) by 6% and then subtracting PAID INTEREST EXPENSE.

L. TOTAL EXPENSES: This is the sum of TOTAL CASH EXPENSE + TOTAL DEPRECIATION EXPENSE + UNPAID OPERATOR AND FAMILY LABOR + INTEREST NOT CHARGED.

M. MANAGEMENT INCOME AND PROFIT: This figure is found by subtracting TOTAL EXPENSES from VALUE OF PRODUCTION.

N. VALUE OF PRODUCTION - CASH EXPENSES: This value is found by subtracting CASH EXPENSES from VALUE OF PRODUCTION.

O. TOTAL INVESTMENT: This enterprise value is copied from page 3 of form 7363.

P. RETURN TO INVESTMENT: This figure is found by adding MANAGEMENT INCOME AND PROFIT, PAID INTEREST EXPENSE, and INTEREST NOT CHARGED.

Q. PERCENT RETURN ON INVESTMENT: This figure is found by dividing RETURN TO INVESTMENT by TOTAL INVESTMENT and multiplying by 100.

R. RETURN TO UNPAID OPERATOR AND FAMILY LABOR, MANAGEMENT AND PROFIT: The total figure is found by adding UNPAID OPERATOR AND FAMILY LABOR EXPENSE to MANAGEMENT INCOME AND PROFIT. The per hour figure is found by dividing the total figure by HOURS OF UNPAID OPERATOR AND FAMILY LABOR. HOURS OF UNPAID OPERATOR AND FAMILY LABOR is calculated by multiplying PRODUCTIVE MAN WORK UNITS by 10 and subtracting HIRED LABOR HOURS for the enterprise. HIRED LABOR HOURS is calculated by dividing Hired Labor Expense for the enterprise (from page 3 of form 7363) by VALUE OF HIRED LABOR PER HOUR. VALUE OF HIRED LABOR PER HOUR is calculated by dividing total Hired Labor Expense (from page 1 of form 7363) by Hired Labor Hours (from page 1 of form 7363).

INDIVIDUAL CROP ENTERPRISE EXPLANATION

ALL CROPS

This is for the code 00 in which all crops are analyzed together.

GENERAL INFORMATION

CROP: Each of the crops included in this analysis is listed here with the acreage (from column 4, page 1 of form 7161) and yield per acre. Yield per acre is found by dividing total production of each crop (from column 5, page

2 of form 7363) by the number of acres of each crop (from column 4, page 1 of form 7363). Pasture, woodland and other land is omitted.

All other calculations for the analysis of All Crops are explained under Crop Summaries.

All the other crops have the following calculations.

A. PRODUCTION UNIT: This is the type of unit in which the crop is measured, such as bushels or tons.

B. POUNDS PER X : This figure gives the number of pounds that is in a production unit described in A above.

C. ACRES: This figure is copied from column 4, page 2 of form 7363.

D. VALUE PER X : This is the value per production unit described in A above. It is the value entered in column 2, page 2 of form 7363.

E. VALUE PER POUND: This value is found by dividing VALUE PER X by POUNDS PER X .

LIVESTOCK SUMMARIES

(Calculations common to all Livestock Enterprises)

In all livestock enterprise summaries, the calculations following the heading "PER COW INFORMATION", "PER CWT. OF MILK PRODUCED", or "PER CWT. INFORMATION" are computed exactly the same, except for a few calculations in the dairy and milk summaries. These exceptions will be explained in the dairy and milk summary explanation.

The calculations following "PER ___X___ INFORMATION" are explained below. The remainder of the calculations for each enterprise analysis follows this explanation under the various enterprise headings.

The calculations explained here are for the TOTAL amount of each item. Per CWT. figures are calculated by dividing the total amount of each item by the POUNDS OF ___X___ PRODUCED (the enterprise in question such as pork, beef or milk) divided by 100 (to convert to CWT.). POUNDS OF ___X___ PRODUCED is explained under the enterprise sections that follow.

PER CWT. INFORMATION

A. PRODUCTIVE MAN WORK UNITS: ADJUSTED STANDARD PMWU or ADJUSTED INDIVIDUAL PMWU for each type of animal in the enterprise (see page 10 for explanation of these items) is multiplied by the number of each type of animal in the enterprise. NUMBER OF ANIMALS by type in the enterprise is calculated by adding the NUMBER OF ___X___ (each type of animal) in beginning inventory to NUMBER OF ___X___ in ending inventory and dividing by 2. For example, to find the Number of Animals in a swine farrowing and feeding enterprise, Add the Number of Sows and Gilts in Beginning Inventory to the number in Ending Inventory and divide by two. This average is multiplied by the appropriate adjusted PMWU figure to find number of PMWU used for sows and gilts. The same calculation is performed for Boars and for each 1,000 pound of market hog produced. These PMWU figures are then added together to give the total PMWU used in the Swine enterprise.

B. VALUE OF LABOR USED*: PRODUCTIVE MAN WORK UNITS used in the enterprise is multiplied by VALUE OF LABOR PER PMWU (see page 9) to give this figure.

C. VALUE OF ___X___ PRODUCTION: For each enterprise this value is found by adding the value of animals and animal products sold from the enterprise plus change in enterprise inventory value (Ending Animal Inventory Value minus Beginning Animal Inventory Value) minus enterprise livestock purchases. "Other Livestock Products" and "Breeding Fees Received" as listed on page 1 of form 7363 are not included in this enterprise calculation.

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* Headings followed by (*) are calculated exactly the same for crop enterprises. These calculations have been explained under Crop Summaries, but are explained again to avoid confusion.

Expenses

D. CASH*: Copied over from page 3 of form 7363.

E. TOTAL CASH EXPENSES*: The sum of all cash expenses. Feeder livestock purchases are not included in this figure.

F. DEPRECIATION*: Copied over from page 3 of form 7363.

G. TOTAL DEPRECIATION*: The sum of depreciation items.

H. UNPAID OPERATOR AND FAMILY LABOR*: VALUE OF LABOR USED minus HIRED LABOR EXPENSE.

I. INTEREST NOT CHARGED*: Investment in the enterprise (from page 3 of form 7363) times 6% minus PAID INTEREST EXPENSE.

J. HOME GROWN FEEDS: Number of bushels or tons of feed fed to enterprise times the value per bushel or ton plus the number of acres of pasture used by enterprise times the value per acre for pasture.

K. TOTAL EXPENSES: TOTAL CASH EXPENSE + TOTAL DEPRECIATION EXPENSE + UNPAID OPERATOR AND FAMILY LABOR + INTEREST NOT CHARGED + HOME GROWN FEEDS gives this total value.

L. MANAGEMENT INCOME AND PROFIT*: VALUE OF ENTERPRISE PRODUCTION minus TOTAL EXPENSES gives this figure.

M. VALUE OF PRODUCTION - CASH EXPENSES*: TOTAL CASH EXPENSES are subtracted from VALUE OF PRODUCTION for the enterprise to give this value.

N. TOTAL INVESTMENT*: This enterprise investment figure is copied from page 3 of form 7363.

O. RETURN TO INVESTMENT*: MANAGEMENT INCOME AND PROFIT plus PAID INTEREST EXPENSE plus INTEREST NOT CHARGED for the enterprise gives this figure.

P. PERCENT RETURN ON INVESTMENT*: This figure is calculated by dividing RETURN TO INVESTMENT by TOTAL INVESTMENT and multiplying by 100.

Q. TOTAL FEED COST: VALUE OF SUPPLEMENT plus VALUE OF GRAIN plus VALUE OF ROUGHAGE gives this figure (explained below).

Feed Required

R. POUNDS OF SUPPLEMENT and VALUE OF SUPPLEMENT: Copied from enterprise column, page 2 of form 7363.

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* Headings followed by (*) are calculated exactly the same for crop enterprises. These calculations have been explained under Crop Summaries but are explained again to avoid confusion.

S. POUNDS OF GRAIN: The sum of the pounds of home grown grain and purchased grain fed to the enterprise. Pounds is determined by multiplying bushels of each grain times pounds per bushel of each type of grain.

T. POUNDS OF ROUGHAGE--HAY EQUIVALENT: The pounds of the different forms of home grown and purchased roughage fed to the enterprise are converted to pounds of hay equivalent and added together. Hay equivalent is found by multiplying the pounds of each roughage by its hay equivalent factor (see the table below). A hay equivalent factor is the pounds of dry hay that a roughage is equal to in feed value.

HAY EQUIVALENT FACTORS

Hay	90% Dry Matter	1
Green Chop	18% Dry Matter	1/5
Direct Cut Silage	22% Dry Matter	1/4
Wilted Grass Silage	30% Dry Matter	1/3
Corn Silage	30% Dry Matter	1/3
Haylage	45% Dry Matter	1/2
Other Silage		1/3

Note that pasture is left out of this calculation.

J. VALUE OF GRAIN: This figure is found by multiplying the bushels of each type of raised grain fed to the enterprise (from page 2 of form 7363) times the appropriate value per bushel and adding this to the value of purchased grain fed to the enterprise (from page 2 of form 7363).

V. VALUE OF ROUGHAGES: This is found by multiplying the tons of each type of roughage fed to the enterprise times the value per ton of each type of roughage, plus the value per acre of pasture times the number of pasture acres fed to the enterprise plus the value of purchased roughage fed to the enterprise.

W. RETURN TO UNPAID OPERATOR AND FAMILY LABOR, MANAGEMENT AND PROFIT*: The total figure is calculated by adding UNPAID OPERATOR AND FAMILY LABOR EXPENSE to MANAGEMENT INCOME AND PROFIT. The per hour figure is calculated by dividing the total figure by HOURS OF UNPAID OPERATOR AND FAMILY LABOR. HOURS OF UNPAID OPERATOR AND FAMILY LABOR is calculated by multiplying PRODUCTIVE MAN WORK UNITS x 10 and subtracting HIRED LABOR HOURS for the enterprise. HIRED LABOR HOURS is calculated by dividing Hired Labor Expense for the enterprise (from page 3 of form 7363) by VALUE OF HIRED LABOR PER HOUR. VALUE OF HIRED LABOR PER HOUR is calculated by dividing Total Hired Labor Expense (from page 1 of form 7363) by Hired Labor Hours (from page 1 of form 7363).

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* Headings followed by (*) are calculated exactly the same for crop enterprises. These calculations have been explained under Crop Summaries, but are explained again to avoid confusion.

INDIVIDUAL LIVESTOCK ENTERPRISE ANALYSIS EXPLANATIONS

DAIRY SUMMARY

A. NUMBER OF COWS: Copied from form 7363.

B. NUMBER OF COWS PER MAN EQUIVALENT: Number of cows divided by NUMBER OF MAN-YEAR EQUIVALENTS used in the dairy enterprise. NUMBER OF MAN-YEAR EQUIVALENTS USED is calculated by dividing PRODUCTIVE MAN WORK UNITS used in the dairy enterprise (see page 9) by 300.

C. DAIRY RETURNS PER $ FEED FED: TOTAL VALUE OF PRODUCTION from the dairy enterprise (F below) divided by the TOTAL FEED COSTS of the dairy enterprise (Q, page 20).

Exceptions to livestock summary explanation.

VALUE OF PRODUCTION

D. DAIRY INCREASE: Ending Inventory + Dairy Cattle Sales or transfers - Beginning Inventory - Dairy Cattle purchases (all these figures are from page 4 form 7363).

E. MILK SOLD: Copied from page 1 of form 7363.

F. TOTAL VALUE OF PRODUCTION: This value is found by adding DAIRY INCREASE + MILK SOLD.

MILK SUMMARY

This summary is for milk and cream sales only. Dairy animal sales, purchases, and changes in inventory are removed from all the calculations.

A. NUMBER OF COWS: Copied from Average Number of Cows in Herd on form 7363.

B. POUNDS OF 3.5% MILK SOLD: This is calculated by multiplying the pounds of milk sold by the average butterfat test and then dividing by 3.5%.

C. POUNDS OF 3.5% MILK SOLD PER COW: This is calculated by dividing POUNDS OF 3.5% MILK SOLD by NUMBER OF COWS. 13,000 pounds is acceptable but your goal should be 14,000 pounds or more.

D. POUNDS OF MILK SOLD PER MAN EQUIVALENT: This is calculated by dividing POUNDS OF 3.5% MILK SOLD by NUMBER OF MAN-YEAR EQUIVALENTS USED in dairy (see page 9).

E. VALUE OF MILK SOLD PER COW: This is calculated by dividing MILK SOLD by NUMBER OF COWS.

F. FEED COSTS FOR MILK PER COW: FEED COSTS FOR MILK divided by NUMBER OF COWS. FEED COSTS FOR MILK is found by multiplying the TOTAL FEED COSTS for dairy by PERCENT OF DAIRY FEED CHARGED TO MILK PRODUCTION divided by 100. (see I below)

G. MILK SALES AS A % OF GROSS FARM INCOME: This percentage is found by dividing MILK SOLD by GROSS FARM INCOME (explained on page 4).

H. MILK SALES AS A % OF DAIRY VALUE: This percentage is found by dividing MILK SOLD by TOTAL VALUE OF PRODUCTION for the dairy enterprise (explained on page 22).

I. PERCENT OF DAIRY FEED CHARGED TO MILK PRODUCTION: This is equal to the percent that MILK SOLD is of TOTAL VALUE OF PRODUCTION for dairy. It is calculated by dividing MILK SOLD by TOTAL VALUE OF PRODUCTION from dairy x 100.

J. EXPENSES: All expense calculations are found by multiplying the expense figures from the Dairy Summary by (MILK SOLD divided by TOTAL VALUE OF PRODUCTION from dairy).

Swine Detailed Analysis

A. NUMBER OF SOWS AND GILTS: This figure is calculated by adding the beginning and ending inventories of sows and gilts and then dividing by 2. This gives the average number on hand during the year.

B. NUMBER OF SOWS AND GILTS PER MAN EQUIVALENT: NUMBER OF SOWS AND GILTS divided by NUMBER OF MAN EQUIVALENTS USED IN SWINE. NUMBER OF MAN EQUIVALENTS USED IN SWINE is found by dividing PRODUCTIVE MAN WORK UNITS used in swine (see explanation on page 9) by 300.

C. NUMBER OF LITTERS FARROWED: This is copied directly from page 4 of form 7363.

D. TOTAL NUMBER OF PIGS WEANED: This figure is copied directly from page 4 of form 7363.

E. NUMBER OF PIGS WEANED PER LITTER: This is calculated by dividing TOTAL NUMBER OF PIGS WEANED by NUMBER OF LITTERS FARROWED.

F. POUNDS OF PORK PRODUCED: This is calculated by adding the weight of hogs in the Ending Inventory (sows, gilts, boars, shoats, or feeder pigs) and pounds of hogs sold (sows & boars, market hogs, feeder pigs) - the weight of Purchased hogs (sows & boars, feeder pigs) and weight of hogs in Beginning Inventory (sows, gilts, boars, shoats or feeder pigs). The difference represents the pounds of pork produced during the year.

G. POUNDS OF PORK PRODUCED PER MAN EQUIVALENT: This is calculated by dividing POUNDS OF PORK PRODUCED by NUMBER OF MAN EQUIVALENTS USED IN SWINE.

H. RETURNS PER $ FEED FED: This figure is calculated by dividing VALUE OF PORK PRODUCTION (explained on page 19) by TOTAL FEED COSTS (explained on page 20).

FEEDER PIGS SOLD OR MARKET HOGS SOLD

I. NUMBER, POUNDS, VALUE: Each of these figures is copied directly from page 4 of form 7363.

J. WT./PIG: Total Weight of Feeder Pigs or Market Hogs sold divided by number of feeder pigs or market hogs sold.

K. VALUE/PIG: Total value of Feeder Pig or Market Hog sales divided by number of feeder pigs or market hogs sold.

BEEF FEEDING SUMMARY

GENERAL INFORMATION

A. NUMBER OF FED CATTLE SOLD: This figure is copied from page 4 of form 7363.

B. NUMBER OF FED CATTLE SOLD PER MAN EQUIVALENT: NUMBER OF FED CATTLE SOLD divided by MAN EQUIVALENTS USED IN FEEDER CATTLE. MAN EQUIVALENTS USED IN FEEDER CATTLE is found by dividing PRODUCTIVE MAN WORK UNITS used in feeder cattle (see page 9) by 300.

C. POUNDS OF BEEF PRODUCED: This figure is found by adding total cattle weight in ending inventory + total weight sold - total weight purchased or transferred - total weight of beginning inventory.

D. POUNDS OF BEEF PRODUCED PER MAN EQUIVALENT: POUNDS OF BEEF PRODUCED divided by MAN EQUIVALENTS USED IN FEEDER CATTLE. (See B above.)

E. PERCENT DEATH LOSS: This is calculated by dividing the number of animals which died by the number of Beef Feeder Cattle Purchased plus the number of Beef Feeder Cattle in Beginning Inventory.

F. RETURNS PER $ FEED FED: This value is calculated by dividing VALUE OF BEEF PRODUCED (explained on page 19) by TOTAL FEED COSTS (explained on page 20).

BEEF BREEDING SUMMARY

GENERAL INFORMATION

A. NUMBER OF COWS BRED TO CALVE: This figure is copied from page 4 of form 7363.

B. PERCENT CALF CROP: This figure is calculated by dividing NUMBER OF COWS BRED TO CALVE by NUMBER OF CALVES SAVED (from page 4 of form 7363).

C. POUNDS OF BEEF PRODUCED: This is calculated by adding the weight of cows, bulls, heifers, and calves in Ending Inventory + the weight of the cows, bulls, heifers and calves Sold - the weight of Purchased cows, bulls, and heifers - the weight of cows, bulls, heifers, and calves in Beginning Inventory. The difference represents the Pounds of Beef Produced during the year.

D. POUNDS OF BEEF PRODUCED PER COW: This is calculated by dividing the POUNDS OF BEEF PRODUCED by the AVERAGE NUMBER OF COWS. The AVERAGE NUMBER OF COWS is determined by adding the Beginning and Ending Inventory number and dividing by 2.

E. RETURNS PER $ FEED FED: This figure is calculated by dividing VALUE OF BEEF PRODUCED (explained on page 19) by TOTAL FEED COSTS (explained on page 20).

SHEEP SUMMARY

This enterprise may also be used to analyze other livestock enterprises. However, all entries are made as if the enterprise were sheep. All calculations and printout values are made as if for a sheep enterprise.

GENERAL INFORMATION

A. AVERAGE NUMBER OF EWES: This figure is calculated by adding the number of ewes in beginning inventory to the number in ending inventory and dividing by 2.

B. NUMBER OF EWES EXPOSED: This figure is copied from form 7363.

C. LAMB CROP PER EWE EXPOSED: This is calculated by dividing the Number of Lambs Born (from form 7363) by the NUMBER OF EWES EXPOSED.

D. POUNDS OF WOOL PER EWE: This is calculated by dividing the Pounds of Wool Sold (from form 7363) by the AVERAGE NUMBER OF EWES.

E. GROSS INCOME PER EWE: This is calculated by dividing Value of LAMB, MUTTON, and WOOL PRODUCTION (explained on page 19) by AVERAGE NUMBER OF EWES.

F. POUNDS OF LAMB AND MUTTON PRODUCED: This is calculated by adding the weight of Ewes, Rams, and Lambs in Ending Inventory and the weight of Ewes, Rams, and Lambs Sold - the weight of Purchased Ewes, Rams, and Lambs - the weight of Ewes, Rams and Lambs in Beginning Inventory.

G. POUNDS OF LAMB AND MUTTON PRODUCED PER MAN EQUIVALENT: POUNDS OF LAMB AND MUTTON PRODUCED divided by NUMBER OF MAN EQUIVALENTS USED FOR SHEEP. NUMBER OF MAN EQUIVALENTS USED FOR SHEEP is calculated by dividing PRODUCTIVE MAN WORK UNITS used for sheep (explained on page 9) by 300.

H. RETURNS PER $ FEED FED: Divide VALUE OF LAMB, MUTTON AND WOOL PRODUCTION (explained on page 19) by TOTAL FEED COSTS (explained on page 20).

POULTRY SUMMARY

GENERAL INFORMATION

A. AVERAGE NUMBER OF HENS: This value is taken directly from form 7363.

B. DOZENS OF EGGS SOLD: This value is taken directly from form 7363.

C. EGGS SOLD PER HEN: This calculated by multiplying the number of DOZENS OF EGGS SOLD by 12 and dividing by the AVERAGE NUMBER OF HENS.

D. NUMBER OF BROILERS SOLD: This value is taken directly from form 7363.

E. POUNDS OF BROILERS SOLD: This value is taken directly from form 7363.

F. NUMBER OF TURKEYS SOLD: This value is taken directly from form 7363.

G. POUNDS OF TURKEYS SOLD: This value is taken directly from form 7363.

H. VALUE OF POULTRY AND EGGS PRODUCED PER MAN EQUIVALENT: This figure is calculated by dividing TOTAL VALUE OF POULTRY AND EGGS (explained on page 19) by NUMBER OF MAN EQUIVALENTS USED IN POULTRY. NUMBER OF MAN EQUIVALENTS USED BY POULTRY is found by dividing PRODUCTIVE MAN WORK UNITS used in poultry (explained on page 9) by 300.

Appendix D

1973 EDITING PROCESS FOR FORM 7363

1. Check "For office use only" box.

   a) Check year.
   b) Add C before Farm Type, Ownership, and Type of business boxes.
   c) See Tables 1, 2 and 3 for Codes.
   d) Check that correct code is entered in these boxes.
   e) Unnumbered farms submitted by County Agent or Area Farm Management Agent will be numbered from 680-699, unnumbered farms submitted by Vo Ag teachers will be numbered 930-999.

TABLE 1

TYPE FARM

Dairy	1
Swine	2
Beef Feed	3
General Crop	4
Special Crop	5
Beef Breeding	6
Poultry	7
Sheep	8
General	9

TABLE 2

OWNERSHIP CODE

	Included In State Summary	Not Included In State Summary
Full Owner	01	11
Part owner-part tenant	02	12
Tenant only	03	13
Absentee	04	14
Tenant and landlord	05	15

TABLE 3

TYPE OF BUSINESS CODE

Type	Code
Proprietorship	1
Partnership	2
Corporation	3
Other	4

2. a) Check labor to be sure it is yearly and not daily, monthly, etc. A minimum of 10 hours must be entered under unpaid labor section.

   b) Hours must be recorded to the nearest 1/10 of an hour. (Example: 3000.0)

   c) Number of operators is to nearest 1/10 of an hour. Check to be sure this is number of operators and not operator age

3. Check to see that year, county and farm no. are entered on top left of pages 2, 3 and 4. (Example: 70-88-001)

PAGE 3

4. Check page 3 to see that all entries are legible and that enterprise codes are correct.

5. Check expenses and investment column to see if figures generally agree with page 1. (Some enterprises may have been omitted.)

PAGE 2

6. Make sure enterprise codes are entered and correct. Check rows E, F, I, M, P, Q, and R to be sure authorized codes are entered. If not, change the code entry to an authorized code, or transfer entries to a row in which the code is authorized.

Authorized Codes

Rows	Codes
E and F	05, 06, 09
I	12, 17, 18
M	~~09, 12, 17, 18~~, 20, 22, 47 through 50
P, Q, R	23 through 39, 47 through 50

7. a) Make sure value/unit is entered to nearest 1/100 of a dollar.
   b) Standard prices for crops with no entry in Column 2 may be found in Table 4.

TABLE 4

CASH PRICES	1971-72	1972-73 Livestock[1]	Cash Grain[2]
Corn	$ 1.10	$ 1.17	$1.35
Soybeans	3.10	3.31	3.62
Oats	.65	.77	.71
Wheat	1.30	1.63	1.40
Grain Sorghum	1.85 CWT	2.03	2.40

[1] Average price at time of harvest.

TABLE 4 (cont.)

CASH PRICES	197.-72	1972-73 Livestock[1]	Cash Grain[2]
Barley	$ .97	$ .96	$ .90
Other Grain	.00	1.00	1.00
Alfalfa Hay	2 .00	31.00	
Clover Mixed Hay	20.00	25.00	
Other Hay	20.00	25.00	
Green Chop	5.00	6.20	
Corn Silage	9.00	9.50[3]	
Haylage	16.50	20.50	
Other Silage	.00	8.50[3]	
Rotation Pasture	12.00	15.00[4]	
Permanent Pasture	8.00	10.00[4]	
High Moisture Ground Ear Corn	22.00/T		

3. Make sure if labor is entered in Column #3, all rows with entries have labor to nearest 1/10 of an hour, and the labor section on page 4 must be filled out if livestock was raised.

9. Check that the sum of Column 6 and Column 7 equals the sum of Column 8, 9 and 10 for each row.

10. Check that Column 10 equals the sum of Columns 11 through 16 for each row.

11. a) Value per Acre for rotation pasture and permanent pasture must be entered if an entry is made in rows N or O.
    b) These entries must be to the nearest 1/100 of a dollar.

12. All other entries on this page are to the nearest whole number except for Column 4, rows J, M, P, Q, R and S which are to the nearest tenth.

PAGE 4

13. See that Percent of Total is entered.

14. Check to see that all livestock entries on page 3 are entered on this page.

---

[1] Average price at time of harvest.

[2] Average yearly price.

[3] Price based on price of corn.

[4] Price based on price of alfalfa hay.

15. Milk Sales

a) Average Butterfat Test is entered to nearest 1/100 of a percent.
b) Average Number of Cows in the herd is entered to the nearest 1/10.

16. Labor

Average Hours Per Year Per Unit is entered to the nearest 1/10 of an hour. If an entry is made here, check page 2 for labor entries in Column 3.

17. All other entries on this page are to the nearest whole number.

RECORD SHEET FOR FARM BUSINESS ANALYSIS FARMS

Date Received	Payment Received	Farm Operators Name	Farm Operator's Number		Omit from Summary	Date Error returned Operator	Date Error Returned Here	Date Payment Turned In	Date Printout Returned

APPENDIX B

E,L

YEAR 1970

COUNTY 76 NO. STARK NAME /X/ EXT. / / VO. AG.

ARM NO.	DATE ENTR.	DATE P. & V.	ERROR	DATE ERROR RETURNED	DAT. TAKEN BY TAYLOR	DATE ALLEN CO.

APPENDIX F

1. Process for punching data from Data Collection Forms onto computer cards.

2. [illegible] copies for making transparencies to guide punching process.

3. Card layout for analysis data.

APPENDIX F,1

PUNCH PROCESS

1. Make acetate overlays (via duplicating machine) for key punch operators to place over input forms. Key punch operators should follow the keyboard key in punching records. All fields from spaces 11 to 80 on cards 020 to 906 are seven spaces in length. Keypunch operators should key punch entries in these fields to reduce punching time.

2. For Expense Distribution page, all cards must be consecutive starting with 850. Thus, if one or more columns are skipped, the overlay must be moved to the right to keep card numbers consecutive. If a card in a 3 card sequence (from 850 on) is blank, punch the first 10 spaces of the card and leave the remaining columns blank. If all cards in a 3 card sequence are blank, the cards may be omitted.

3. Blank fields may be left blank or punched with zeros.

4. Blank cards may be omitted (except for blank cards in the 3 card sequence from card 850 on. See 2 above.).

5. Each card must be verified by a key punch operator other than the one that punched the original card.

6. Mistakes noted by key punch operators should be reported to persons doing the editing.

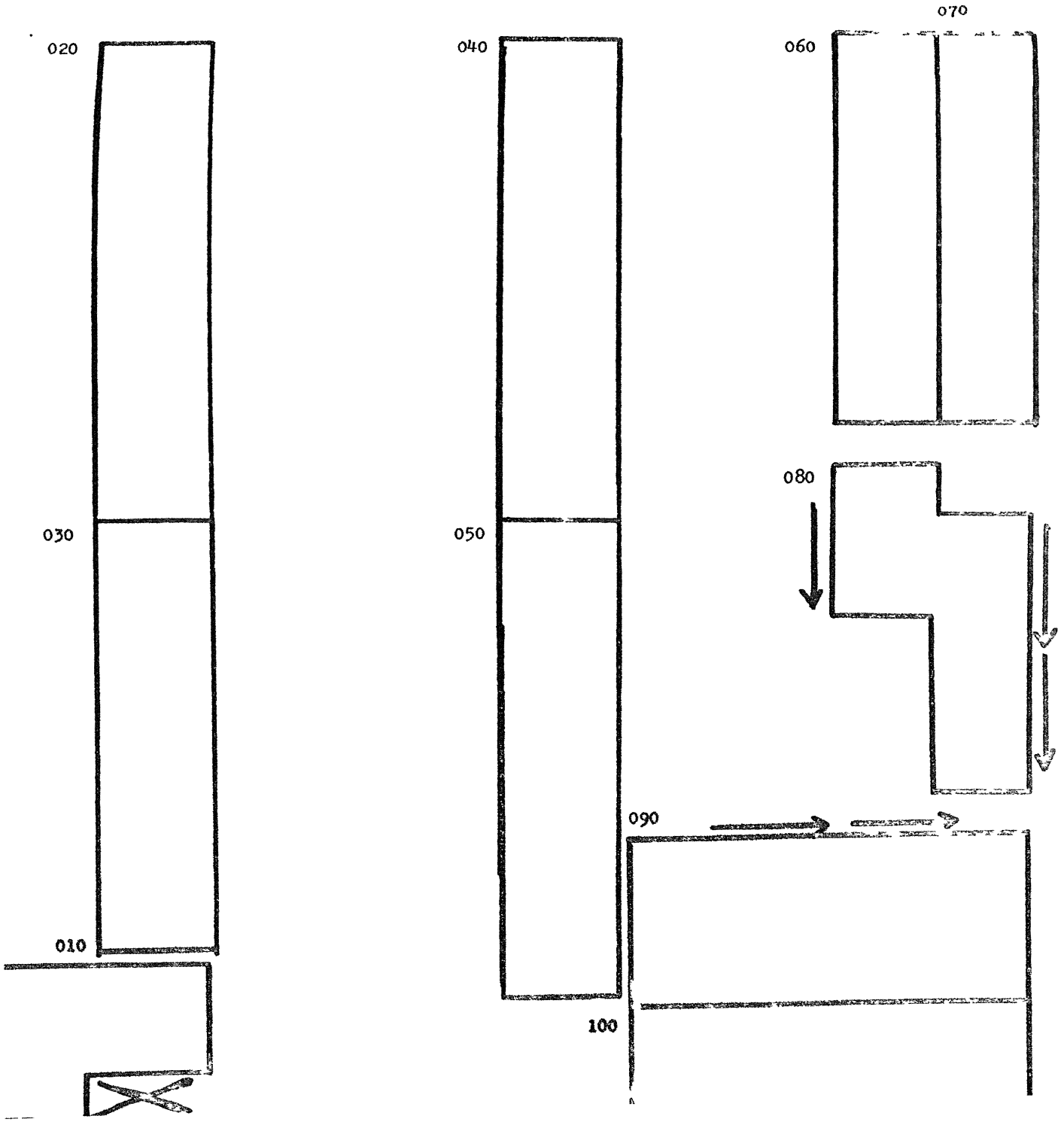
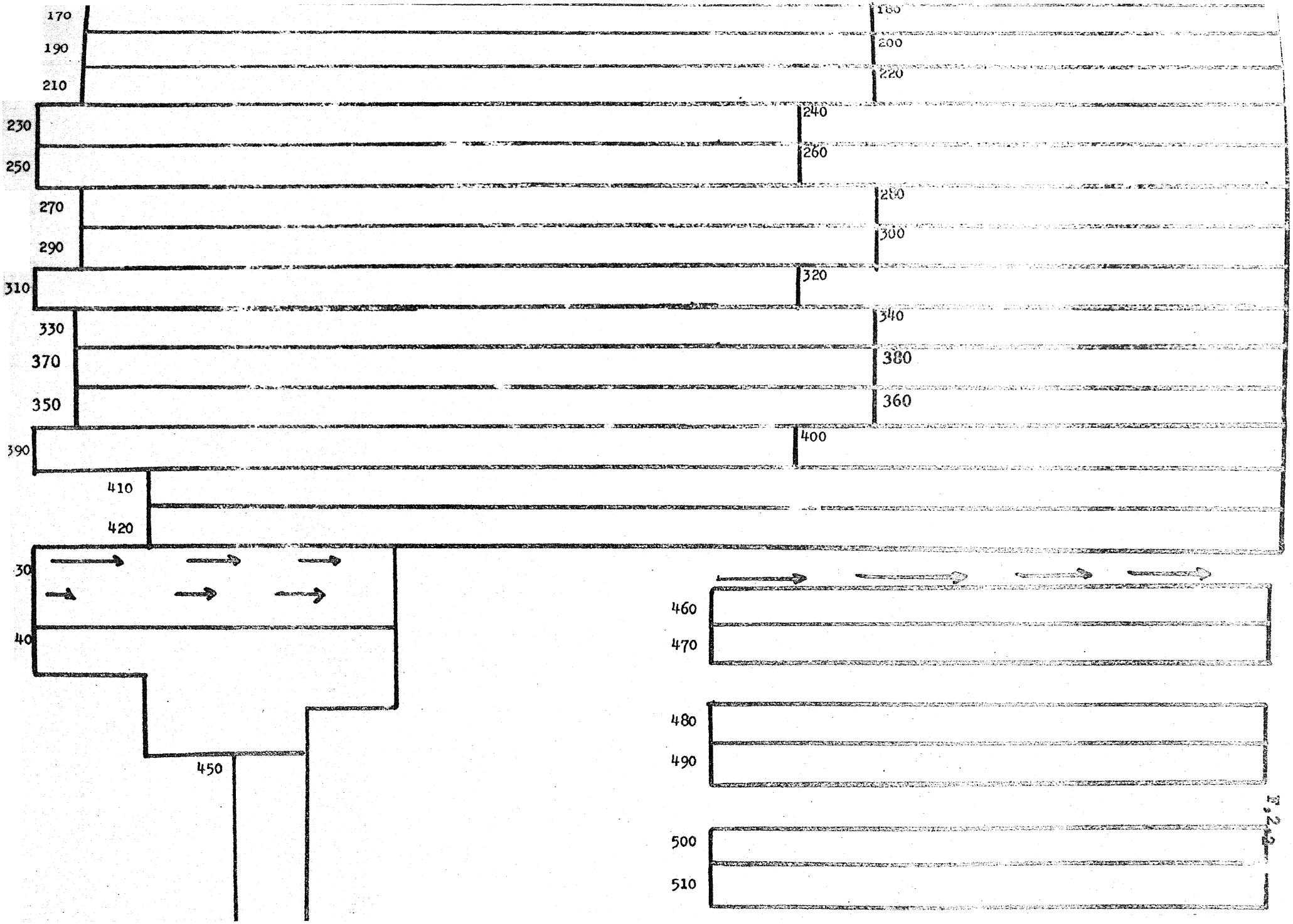


Fig 2.1

No CARD 110, 120
NUMBERS 130
OR
140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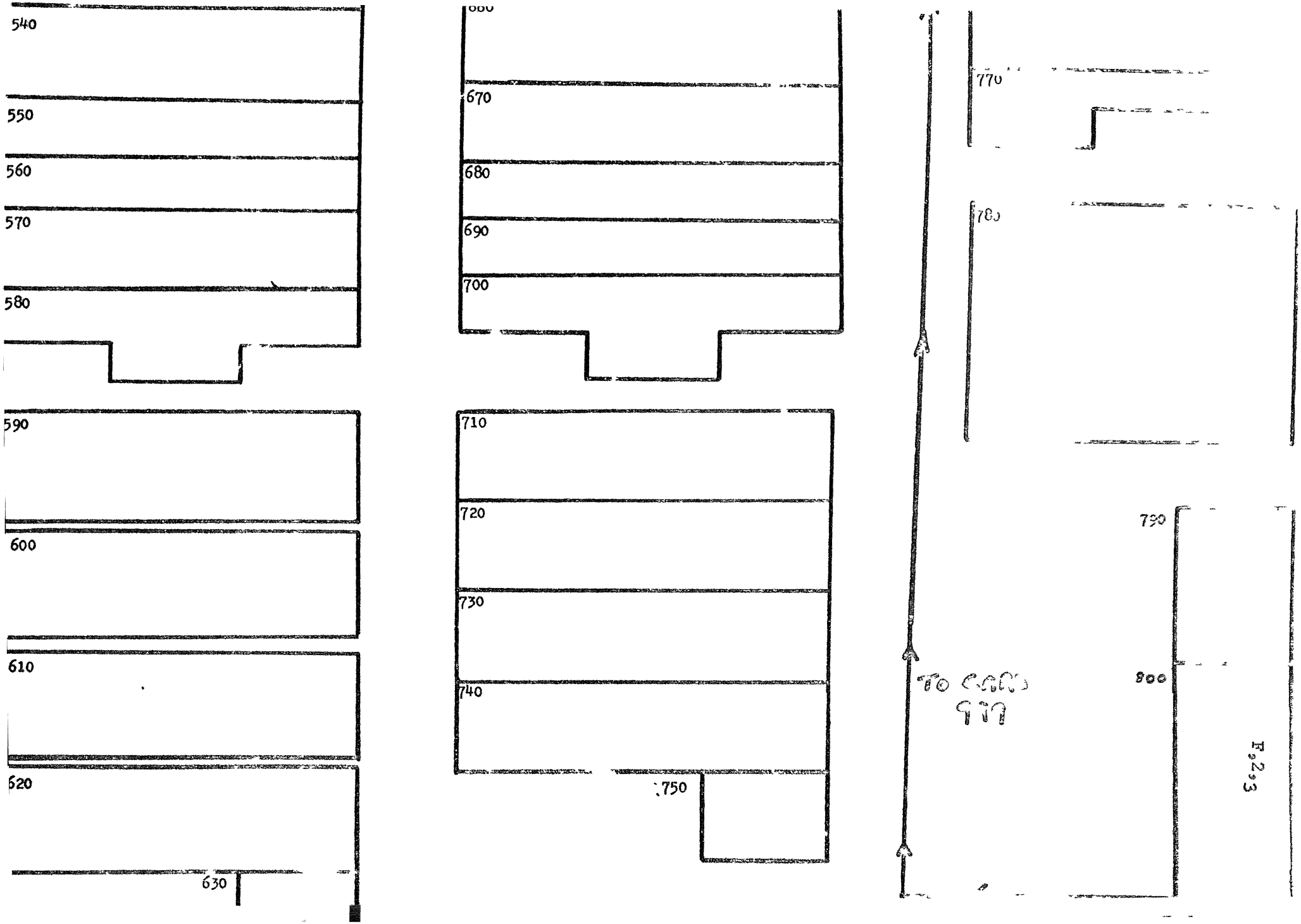
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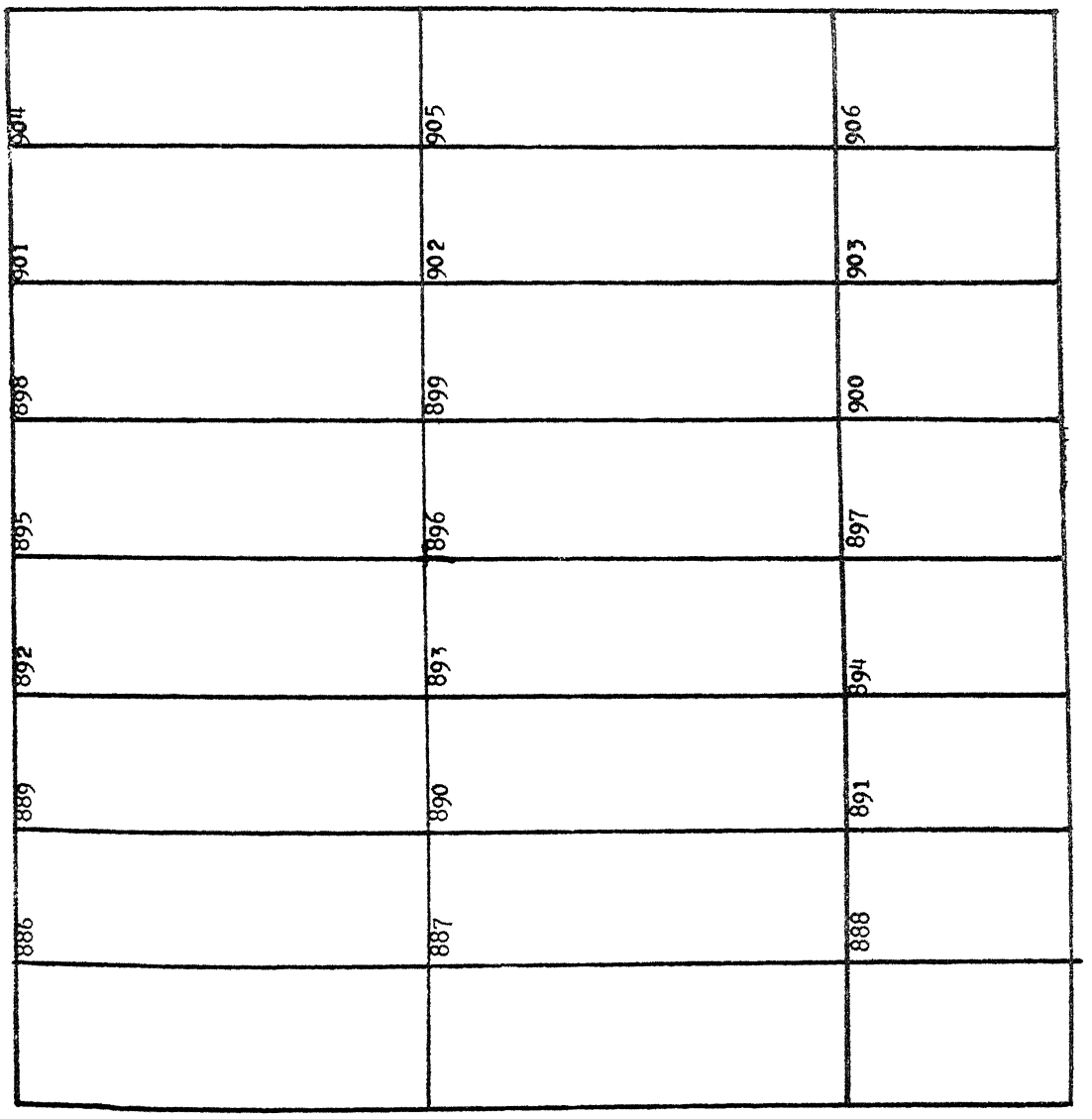
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Instructions Updated APPENDIX F,3

Blank cards - Col 1 Card Type Feb 21, 1973
850 on - Col 2 Tape Card (In Years Series)
Blank Punch Print 10 Punch Col 1 Card)

Blank Fields - Leave Blank or Punch Zeros

PUBLIC SERVICE COMPUTER CENTER

Farm Management Analysis Card Layouts

Cards 850 on must be punched in sequence, i.e. cards must be consecutively numbered 850, 851, 852, 853 ... No omissions may occure such as 850, 852, 853 ...

Card Code	Positions	Data Description or Value
010	1-3	'010'
	*4-5	Data Year
	*6-7	County Number
	*8-10	Farm Number
	11-12	Type Farm
	13-14	Ownership Code
	15-16	~~Retail Analysis Code~~ Ownership Type
020	1-3	'020'
	11-17	Milk and Cream
	18-24	Poultry and Eggs
	25-31	General Crops
	32-38	Special Crops
	39-45	Cash Rent and Royalties
	46-52	Labor off Farm
	53-59	Custom Work
	60-66	Wool & Wool Subsidies
	67-73	Other Livestock Products
	74-80	Tax Refund
030	1-3	'030'
	11-17	Patronage Dividend
	18-24	Breeding Fees Received
	25-31	Miscellaneous Receipts
	32-38	Government Crop Payments
	39-45	Government Payments
	46-52	Swine } Market Livestock
	53-59	Calves } Both Raised and
	60-66	Veal Calves } Purchased
	67-73	Lambs }
040	1-3	'040'
	11-17	Hired Labor
	18-24	Feed Purchased
	25-31	Farm Supplies
	32-38	Machinery Repairs
	39-45	Building, Fence, etc., Repairs
	46-52	Fuel, Oil, Grease
	53-59	Utilities ~~Electricity~~ (Farm Share)
	60-66	~~Telephone~~ (Farm Share) Drying and Storage.
	67-73	Miscellaneous Expenses
	74-80	Seeds and Plants

*These card columns represent constant data and are repeated in every unique card.

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
050	1-3	'050'
	11-17	Fertilizer and Lime
	18-24	Machine Hire and Trucking
	25-31	Auto Expense (Farm Share)
	32-38	Interest on Notes and Mortgage
	39-45	Veterinary and Medicine
	46-52	Breeding and Registration Fees
	53-59	Feeder Livestock Purchase
	60-66	Taxes
	67-73	Rent (Cash)
	74-80	Insurance
060	1-3	'060' Beginning Inventories
	11-17	Purchased Breed Livestock
	18-24	Raised Breed Livestock
	25-31	Market Livestock
	32-38	Grain, Hay Supplement
	39-45	Supplies and Fertilizer
	46-52	Machinery, Equipment
	53-59	Buildings, Fence, Tile, etc.
	60-66	Land (Current Ag. Value)
070	1-3	'070' Closing Inventories
	11-17	Purchased Breed Livestock
	18-24	Raised Breed Livestock
	25-31	Market Livestock
	32-38	Grain, Hay Supplement
	39-45	Supplies and Fertilizer
	46-52	Machinery, Equipment
	53-59	Buildings, Fence, Tile, etc.
	60-66	Land (Current Ag. Value)
080	1-3	'080' Capital Gains
	11-17	Raised Breed Livestock
	18-24	Purchased Breed Livestock (Gain)
	25-31	Machinery, Equipment (Gain)
	32-38	Purchased Breed Livestock (Loss)
	39-45	Machinery, Equipment (Loss)
	46-52	Building, Fence, Tile, etc. (Depreciation)
	53-59	Machinery, Equipment (Depreciation)
	60-66	Purchased Breed Livestock (Depreciation)

Farm Management Analysis Card Layout:

Card Code	Positions	Data Description or Value
090	1-3	'090' Labor
		Operator's Labor Available
	11-17	~~Age~~ Number of Operators
	18-24	Hours
	25-31	Value per hour
	32-38	~~Age~~ Number of operators
	39-45	Hours
	46-52	Value per hour
		Unpaid Family Labor Used
	53-59	Hours (Wife)
	60-66	Value per hour (Wife)
	67-73	Hours (Family Labor Over 14)
	74-80	Value per hour (Family Labor Over 14)
100	1-3	'100' Labor
		Unpaid Family Labor Used
	11-17	Hours (Family Labor Under 14)
	18-24	Value per hour (Family Labor Under 14)
		Hired Labor
	25-31	Hours
110	1-3	'110' Livestock Production
		Dairy
	11-17	Average number of dairy cows
	18-24	Average number of dairy heifer Replacements in Inventory
	25-31	Average number of bulls in inventory
		Swine
	32-38	Number of litters farrowed
	39-45	Average number of boars in inventory
	46-52	Net hog weight gained - marketed hogs
		Beef
	53-59	Number of beef cows bred to calve
	60-66	Average number of bulls
	67-73	Average number of beef heifer replacements in inventory
	74-80	Net cattle weight gained - beef feeders
~~120~~	1-3	'120 Livestock Production
		Poultry
	11-17	MWT of turkeys
	18-24	MWT of broilers
	25-31	Average number of laying hens
		Sheep
	32-38	Number of ewes exposed
	39-45	Net lamb weight gained - Lambs

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
150	1-3	'150' 'Crop Production - Corn (bushel)'
	11-17	Value/Unit
	18-24	Labor/Acre (hours)
	25-31	Total Acres
	32-38	Total Production
	39-45	Share of Production
	46-52	Beginning Inventory
	53-59	Sales
	60-66	Closing Inventory
	67-73	Fed on Farm
	74-80	Dairy - Fed to Livestock
160	1-3	'160' 'Crops Fed to Livestock - Corn'
	11-17	Hogs
	18-24	Feeder Cattle
	25-31	Beef Cows
	32-38	Sheep
	39-45	Poultry
170	1-3	'170' 'Crop Production - Soy beans (bushel)
	11-17	Value/Unit
	18-24	Labor/Acre (hours)
	25-31	Total Acres
	32-38	Total Production
	39-45	Share of Production
	46-52	Beginning Inventory
	53-59	Sales
	60-66	Closing Inventory
	67-73	Fed on Farm
	74-80	Dairy - Fed to Livestock
180	1-3	'180' 'Crops Fed to Livestock - Soybeans (bushel)
	11-17	Hogs
	18-24	Feeder Cattle
	25-31	Beef Cows
	32-38	Sheep
	39-45	Poultry
190	1-3	'190' 'Crop Production - Oats and/or Speltz (bushel)'
	11-17	Value/Unit
	18-24	Labor/Acre (hours)
	25-31	Total Acres
	32-38	Total Production
	39-45	Share of Production

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
	46-52	Beginning Inventory
	53-59	Sales
	60-66	Closing Inventory
	67-73	Fed on Farm
	74-80	Dairy - Fed to Livestock
200	1-3	'200' Crops Fed to Livestock - Oats and/or Speltz (Bushels)
	11-17	Hogs
	18-24	Feeder Cattle
	25-31	Beef Cows
	32-38	Sheep
	39-45	Poultry
210	1-3	'210' Crop Production - Wheat (Bushels)
	11-17	Value/Unit
	18-24	Labor/Acre (hours)
	25-31	Total Acres
	32-38	Total Production
	39-45	Share of Production
	46-52	Beginning Inventory
	53-59	Sales
	60-66	Closing Inventory
	67-73	Fed on Farm
	74-80	Dairy - Fed to Livestock
220	1-3	'220' Crops Fed to Livestock - Wheat (Bushel)
	11-17	Hogs
	18-24	Feeder Cattle
	25-31	Beef Cows
	32-38	Sheep
	39-45	Poultry
230	1-3	'230' Crop Production - "Other Grain" (Bushel)
	11-17	Grain Type Code
	18-24	Value/Unit
	25-31	Labor/Acre (hours)
	32-38	Total Acres
	39-45	Total Production
	46-52	Share of Production
	53-59	Beginning Inventory
	60-66	Sales
	67-73	Closing Inventory
	74-80	Fed on Farm
240	1-3	'240' Crops Fed to Livestock - "Other Grain" (bushel)

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
	11-17	Dairy
	18-24	Hogs
	25-31	Feeder Cattle
	32-38	Beef Cows
	39-45	Sheep
	46-52	Poultry
250	1-3	'250' Crop Production - "Other Grain" (bushel)
	11-17	Grain Type Code
	18-24	Value/Unit
	25-31	Labor/Acre (hours)
	32-38	Total Acres
	39-45	Total Production
	46-52	Share of Production
	53-59	Beginning Inventory
	60-66	Sales
	67-73	Closing Inventory
	74-80	Fed on Farm
260	1-3	'260' Crops Fed to Livestock - "Other Grain" (bushel)
	11-17	Dairy
	18-24	Hogs
	25-31	Feeder Cattle
	32-38	Beef Cows
	39-45	Sheep
	46-52	Poultry
270	1-3	'270' Crop Production - Alfalfa Hay (Ton)
	11-17	Value/Unit
	18-24	Labor/Acre (hours)
	25-31	Total Acres
	32-38	Total Production
	39-45	Share of Production
	46-52	Beginning Inventory
	53-59	Sales
	60-66	Closing Inventory
	67-73	Fed on Farm
	74-80	Dairy - Fed to Livestock
280	1-3	'280' Crops Fed to Livestock - Alfalfa Hay (tons)
	11-17	Hogs
	18-24	Feeder Cattle
	25-31	Beef Cows
	32-38	Sheep
	39-45	Poultry

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
290	1-3	'290' Crop Production - Clover, Mixed Hay (tons)
	11-17	Value/Unit
	18-24	Labor/Acre (hours)
	25-31	Total Acres
	32-38	Total Production
	39-45	Share of Production
	46-52	Beginning Inventory
	53-59	Sales
	60-66	Closing Inventory
	67-73	Fed on Farm
	74-80	Dairy - Fed to Livestock
300	1-3	'300' Crops Fed to Livestock - Clover, Mixed Hay - (tons)
	11-17	Hogs
	18-24	Feeder Cattle
	25-31	Beef Cows
	32-38	Sheep
	39-45	Poultry
310	1-3	'310' Crop Production "Other Hay" (tons)
	11-17	Crop Code
	18-24	Value/Unit
	25-31	Labor/Acre (hours)
	32-38	Total Acres
	39-45	Total Production
	46-52	Share of Production
	53-59	Beginning Inventory
	60-66	Sales
	67-73	Closing Inventory
	74-80	Fed on Farm
320	1-3	'320' Crops Fed to Livestock - "Other Hay" (tons)
	11-17	Dairy
	18-24	Hogs
	25-31	Feeder Cattle
	32-38	Beef Cows
	39-45	Sheep
	46-52	Poultry
330	1-3	'330' Crop Production - "Green Crop" (tons)
	11-17	Value/Unit
	18-24	Labor/Acre (hours)
	25-31	Total Acres
	32-38	Total Production
	39-45	Share of Production
	46-52	Beginning Inventory

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
	53-59	Sales
	60-66	Closing Inventory
	67-73	Fed on Farm
	74-80	Dairy - Fed to Livestock
340	1-3	'340' Crops Fed to Livestock "Green Crop" (tons)
	11-17	Hogs
	18-24	Feeder Cattle
	25-31	Beef Cows
	32-38	Sheep
	39-45	Poultry
350	1-3	'350' Crop Production - Corn Silage (tons)
	11-17	Value/Unit
	18-24	Labor/Acre (hours)
	25-31	Total Acres
	32-38	Total Production
	39-45	Share of Production
	46-52	Beginning Inventory
	53-59	Sales
	60-66	Closing Inventory
	67-73	Fed on Farm
	74-80	Dairy - Fed to Livestock
360	1-3	'360' Crops Fed to Livestock - Corn Silage (tons)
	11-17	Hogs
	18-24	Feeder Cattle
	25-31	Beef Cows
	32-38	Sheep
	39-45	Poultry
370	1-3	'370' Crop Production - "Haylage" (tons)
	11-17	Value/Unit
	18-24	Labor/Acre (hours)
	25-31	Total Acres
	32-38	Total Production
	39-45	Share of Production
	46-52	Beginning Inventory
	53-59	Sales
	60-66	Closing Inventory
	67-73	Fed on Farm
	74-80	Dairy - Fed to Livestock
380	1-3	'380' Crops Fed to Livestock - Haylage (tons)
	11-17	Hogs
	18-24	Feeder Cattle

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
	25-31	Beef Cows
	32-38	Sheep
	39-45	Poultry
390	1-3	'390' Crop Production - "Other Silage" (tons)
	11-17	Silage Code
	18-24	Value/Unit
	25-31	Labor/Acre (hours)
	32-38	Total Acres
	39-45	Total Production
	46-52	Share of Production
	53-59	Beginning Inventory
	60-66	Sales
	67-73	Closing Inventory
	74-80	Fed on Farm
400	1-3	'400' Crops Fed to Livestock - "Other Silage" (tons)
	11-17	Dairy
	18-24	Hogs
	25-31	Feeder Cattle
	32-38	Beef Cows
	39-45	Sheep
	46-52	Poultry
410	1-3	'410' Rotation Pasture
		Crop Production
	11-17	Labor/Acre (hours)
	18-24	Total Acres
	25-31	Rotation Pasture used (Value per acre in $)
	32-38	Fed on Farm
		Crops Fed to Livestock
	39-45	Dairy
	46-52	Hogs
	53-59	Feeder Cattle
	60-66	Beef Cows
	67-73	Sheep
	74-80	Poultry
420	1-3	'420' Permanent Pasture
		Crop Production
	11-17	Labor/Acre (hours)
	18-24	Total Acres
	25-31	Permanent Pasture Used (Value/Acre - $)
	32-38	Fed on Farm
		Crops Fed to Livestock
	39-45	Dairy
	46-52	Hogs
	53-59	Feeder Cattle

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
	60-66	Beef Cows
	67-73	Sheep
	74-80	Poultry
430	1-3	'430' Crop Production - Special Crop"
		Special Crop (P)
	11-17	Code
	18-24	Labor/Acre (hours)
	25-31	Total Acres
	32-38	Total Production ($)
		Special Crop (Q)
	39-45	Code
	46-52	Labor/Acre (hours)
	53-59	Total Acres
	60-66	Total Production ($)
440	1-3	'440' Crop Production - "Special Crop"
		Special Crop (R)
	11-17	Code
	18-24	Labor/Acre (hours)
	25-31	Total Acres
	32-38	Total Production ($)
		Other Special Crop
	39-45	Labor/Acre (hours)
	46-52	Total Acres
	53-59	Total Production ($)
		Diverted Acres
	60-66	Labor/Acre (hours)
	67-73	Total Acres
450	1-3	'450'
		Total Acres In
	11-17	Woodland
	18-24	Other Land
	25-31	Total Acreage - All Crops
	32-38	Crop Acres - Owned
	39-45	Crop Acres - Rented
460	1-3	'460' Actual Pounds of Purchased Supplement Fed
	11-17	Total Fed on Farm
	18-24	Dairy
	25-31	Hogs
	32-38	Feeder Cattle
	39-45	Beef Cows
	46-52	Sheep
	53-59	Poultry

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
470	1-3	'470' Actual Dollars of Purchased Supplement Fed
	11-17	Total Fed on Farm
	18-24	Dairy
	25-31	Hogs
	32-38	Feeder Cattle
	39-45	Beef Cows
	46-52	Sheep
	53-59	Poultry
480	1-3	'480' Actual Pounds of Purchased Grain Fed
	11-17	Total Fed on Farm
	18-24	Dairy
	25-31	Hogs
	32-38	Feeder Cattle
	39-45	Beef Cows
	46-52	Sheep
	53-59	Poultry
490	1-3	'490' Actual Dollars of Purchased Grain Fed
	11-17	Total Fed on Farm
	18-24	Dairy
	25-31	Hogs
	32-38	Feeder Cattle
	39-45	Beef Cows
	46-52	Sheep
	53-59	Poultry
500	1-3	'500' Actual Pounds of All Purchased Roughages Fed
	11-17	Total Fed on Farm
	18-24	Dairy
	25-31	Hogs
	32-38	Feeder Cattle
	39-45	Beef Cows
	46-52	Sheep
	53-59	Poultry
510	1-3	'510' Actual Dollars of All Purchased Roughages Fed
	11-17	Total Fed on Farm
	18-24	Dairy
	25-31	Hogs
	32-38	Feeder Cattle
	39-45	Beef Cows
	46-52	Sheep
	53-59	Poultry

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
520	1-3	'520' Swine - Begin Inventory
		Sows
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Gilts
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
530	1-3	'530' Swine - Begin Inventory
		Boars
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Shoats and/or Feeder Pigs
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
540	1-3	'540' Swine - Purchases
		Sows
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Boars
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
		Feeder Pigs
	53-59	Number
	60-66	Total Weight
	67-73	Total Value
550	1-3	'550' Swine - Sales
		Sows
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Boars
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
560	1-3	'560' Swine - Sales
		Market Hogs
	11-17	Number
	18-24	Total Weight
	25-31	Total Value

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
		Feeder Pigs
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
570	1-3	'570' Swine - Ending Inventory
		Sows
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Gilts
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
		Boars
	53-59	Number
	60-66	Total Weight
	67-73	Total Value
580	1-3	'580' Swine - Ending Inventory
		Shoats and/or Feeder Pigs
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Litter Information
	32-38	Number of Litters farrowed
	39-45	Number of Pigs Weaned
590	1-3	'590' Dairy - Beginning Inventory
		Cows
	11-17	Number
	18-24	Total Value
		Bulls
	25-31	Number
	32-38	Total Value
		Heifers
	39-45	Number
	46-52	Total Value
		Calves
	53-59	Number
	60-66	Total Value
600	1-3	'600' Dairy - Purchases
		Cows
	11-17	Number
	18-24	Total Value
		Bulls
	25-31	Number
	32-38	Total Value

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
		Heifers
	39-45	Number
	46-52	Total Value
		Calves
	53-59	Number
	60-66	Total Value
610	1-3	'610' Dairy - Sales or Transferred to Feeders
		Cows
	11-17	Number
	18-24	Total Value
		Bulls
	25-31	Number
	32-38	Total Value
		Heifers
	39-45	Number
	46-52	Total Value
		Calves
	53-59	Number
	60-66	Total Value
620	1-3	'620' Dairy - Ending Inventory
		Cows
	11-17	Number
	18-24	Total Value
		Bulls
	25-31	Number
	32-38	Total Value
		Heifers
	39-45	Number
	46-52	Total Value
		Calves
	53-59	Number
	60-66	Total Value
630	1-3	'630' Dairy - Milk Sales
	11-17	Total Pounds
	18-24	Average Butterfat Test
	25-31	Average Number of Cows in the Herd
640	1-3	'640' Beef Breeding - Beginning Inventory
		Cows
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Bulls
	32-38	Number
	39-45	Total Weight
	46-52	Total Value

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
650	1-3	'650' Beef Breeding - Beginning Inventory
		Heifers
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Calves
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
660	1-3	'660' Beef Breeding - Purchases
		Cows
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Bulls
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
		Heifers
	53-59	Number
	60-66	Total Weight
	67-73	Total Value
670	1-3	'670' Beef Breeding - Sales or Transferred to Feeders
		Cows
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Bulls
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
680	1-3	'680' Beef Breeding - Sales or Transferred to Feeders
		Heifers
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Calves
	32-38	Number
	39-45	Total Weight
	46-52	Total Value

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
690	1-3	'690' Beef Breeding - Ending Inventory
		Cows
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Bulls
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
700	1-3	'700' Beef Breeding - Ending Inventory
		Heifers
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Calves
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
	53-59	Number of Cows Bred to Calve
	60-66	Number of Calves Saved
710	1-3	'710' Sheep - Beginning Inventory
		Ewes
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Rams
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
		Lambs
	53-59	Number
	60-66	Total Weight
	67-73	Total Value
720	1-3	'720' Sheep - Purchases
		Ewes
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Rams
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
		Lambs
	53-59	Number
	60-66	Total Weight
	67-73	Total Value

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
730	1-3	'730' Sheep - Sales
		Ewes
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Rams
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
		Lambs
	53-59	Number
	60-66	Total Weight
	67-73	Total Value
740	1-3	'740' Sheep - Ending Inventory
		Ewes
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
		Rams
	32-38	Number
	39-45	Total Weight
	46-52	Total Value
		Lambs
	53-59	Number
	60-66	Total Weight
	67-73	Total Value
750	1-3	'750' Sheep - Wool Sales
	11-17	Wool Sales - Pounds
	18-24	Number of Ewes Exposed
	25-31	Number of Lambs Born
760	1-3	'760' Beef Feeding - Begin Inventory
	11-17	Number
	18-24	Total Weight
	25-31	Total Value
	32-38	Number Purchased or Transferred
	39-45	Total Weight
	46-52	Total Value
	53-59	Number Sales
	60-66	Total Weight
	67-73	Total Value
770	1-3	'770' Beef Feeding - Ending Inventory
		Ending Inventory
	11-17	Number
	18-24	Total Weight
	25-31	Total Value

Farm Management Analysis Card Layouts

ard Code	Positions	Data Description or Value
		Number Died
	32-38	Number
780	1-3	'780' Poultry
		Laying Hens
	11-17	Average number for year
	18-24	Eggs sold (dozen)
	25-31	Broilers - Number sold
	32-38	Turkeys - Number sold
	39-45	Broilers - Pounds sold
	46-52	Turkey - Pounds sold
790	1-3	'790' Labor Expressed in Average Hours Per Year Per Unit
	11-17	Dairy Cow
	18-24	Replacement Heifer - Dairy
	25-31	Litter Farrowed - To Weaning
	32-38	Market Hog - Weaning to Market - Per 1000 pounds gain
	39-45	Boar
	46-52	Beef Cow
800	1-3	'800' Labor Expressed in Average Hours Per Year Per Unit
	11-17	Bull - Beef
	18-24	Replacement Heifer - Beef
	25-31	Beef Feeder - Per 1000 Pounds Gain
	32-38	Poultry - Per 1000 birds
	39-45	Ewes and Lamb to Weaning
	46-52	Lambs - Per 100 Pounds Gain
	53-59	Bull - Dairy
	60-66	MWT - Turkey
	67-73	MWT - Broilers
999	1-3	'999' Operator's Share of the Livestock Represented by the "Livestock Enterprise Analysis"
	11-17	Percent of total
850	1-3	'850' Enterprise Expense Distribution
		Cash Expenses
	11-17	Enterprise Code
	18-24	Hired Labor
	25-31	~~Feed Purchased~~
	32-38	Farm Supplies
	39-45	Machinery Repairs
	46-52	Building, Fence, etc., Repairs
	53-59	Fuel, Oil, Grease

utilities

Farm Management Analysis Card Layouts

Card Code	Positions	Data Description or Value
	60-66	~~Electricity (Farm Share)~~
	67-73	~~Telephone (Farm Share)~~
	~~74-80~~	Miscellaneous Expense
851	1-3	'851' Enterprise Expense Distribution
		Cash Expenses
	11-17	Seeds and Plants
	18-24	Fertilizer and Lime
	25-31	Machine Hire and Trucking
	32-38	Auto Expenses (Farm Share)
	39-45	Interest on Notes and Mortgages
	46-52	Veterinary and Medicine
	53-59	Breeding Fees and Regs
	60-66	Feeder Livestock Purchase
	67-73	Taxes
	74-80	Rent (Cash)
852	1-3	'852' Enterprise Expense Distribution
		Cash Expense
	11-17	Insurance
		Depreciation
	18-24	Building, Fence, Tile, Etc.
	25-31	Machinery, Equipment
	32-38	Purchasing, Breeding Livestock
		Investment
	39-45	Investment (Dollars)

Card codes 853-998 are coded in the same format as 850-852. Each code is identified by the enterprise code entered. We can ... [illegible] ... If a blank column or columns are mixed with columns with data, punch the columns with data consecutively.

The Ohio State University Hospitals

APPLICATION 1971 FARM BUSINESS SUMMARY DATE 7-19-72

IDENTIFICATION	CASH-RECEIPTS CASHREC	CAPITAL GAINS CAPGAN	TOTAL INV. INVENTORY CHANGE INVCHG	FEEDER LIVSTK PURCHASES FDLVPUR	GROSS INCOME GROSINC	CASH-EXPENSES EXPCSH	DEPRECIATION EXPDEP	INTEREST ON CAPITAL INVESTMENT EXPINT	MANAGEMENT INCOME MGTINC	UNPAID OPERATOR & FAMILY LABOR OPRFAMLAB
	8	7	7	7	8	7	6	6	7	6

IDENTIFICATION	VARIABLE EXPENSES VAREXP	OVERHEAD EXPENSES OHEXP	NET CASH INCOME NETCINC	NET FARM INCOME NETFINC	TOTAL CAPITAL INVESTMENT TOTINV	RETURN ON INVESTMENT ROIV	RETURN TO OP & FAM LAB & MGMT & PROFIT ROLABPUT	RETURN TO OP & FAM LABOR PER HOUR ROLABPH	MAN EQUIV HRS USED MANEQ	VALUE OF HIRED LABOR HRLABH	GENERAL CROP ACRES CROPA
	6	6	7	7	8	6	7	6	6	5	5

ECOD2 ECOD4 HAYA COW#

IDENTIFICATION	TOTAL CROP ACRES CROPAT	VALUE OF GENERAL CROPS CROPVG	VALUE OF TOTAL CROPS CROPUT	NET LIVSTK DOLLAR INCREASE NLVINCR	TOT-VALUE OF FEED FED TO ALL LIVSTK LVFEDV	ENT CODE 1 ECOD1	ENT CODE 2	ENT CODE 3 ECOD3	ENT CODE 4	ACRES OF CORN CORNA	ACRES OF SOYBEAN SOYA	ACRES OF HAY HAYACRE	AVER NO COWS IN HERD	MILK-SALES MILKV	LBS-3-5-MILK-SOLD MILKLB	NO LITTERS FARROW LITF
	4	7	7	7	7	2	2	2	2	7	5	3	3	7	7	5

Appendix C

Beef Feed

IDENTIFICATION	LBS-PORK-PRODUCED PORKLB	FAT CATTLE SOLD FATCTL#	LBS-BEEF PRODUCED BEEFLB	COWS-BRED TO CALVE COWBRD#	ROTATIONAL PASTURE ROTPSTA	SOWS-FOR-LITTER-PURPOSES SOWFORP	AVE # LAYING HENS HEN#	LBS BROILERS SOLD BRLRLBS	LBS TURKEYS SOLD TRKYLBS
	7	4	7	5	5	6	5	6	6

IDENTIFICATION =
- CC 1 = CARD CODE CARDCOD
- CC 2 = LAST DIGIT OF YEAR YEAR
- CC 3+4 = AREA CODE AREACOD
- CC 5+6 = COUNTY-NO CTY#
- CC 7-9 = FARM-NO FM#
- CC 10 = TYPE FARM FMTYPE
- CC 11 = OWNER-CODE OWNCOD

Fat Code 1: Dairy 2: Hogs 3: Feeder Cattle 4: Beef Cows

APPENDIX H

Approximate Number of Farm Records Analyzed for 1971, Suitable for State Summary

Listing by Farm Type and Ownership Category

Farm Type	Ownership Category				
	Full owner	Part owner Part tenant	Tenant	Tenant and Landlord	TOTAL
Dairy	175	29	9	15	228
Swine	11	4	2	1	18
Beef Feeding	13	5	7	1	26
General Crop	12	29	19	0	60
Special Crop	4	3	1	1	9
Beef Breeding	3	0	1	0	4
Poultry	5	0	0	0	5
Sheep	1	1	0	0	2
General Farm	13	10	0	0	23
TOTAL	237	81	39	18	375

APPENDIX H

SUMMARIES FOR 1971 FARM BUSINESS ANALYSIS

1. All farms by Return/Hour to Operator and Family Labor + Management.

DAIRY

2. All Dairy farms by Return/Hour to Farm.

3. All Owner-Operator and Tenant-Landlord Dairy farms by return/hour to farm.

4.* All Owner-Operator and Tenant-Landlord Dairy farms by Return/Hour to Dairy Enterprise.

5. All Tenant Dairy farms by Return/Hour to Farm.

CROPS

6.* All Owner-Operator and Tenant-Landlord General crop farms by Return per hour to farm.

7.* All Tenant General Crop farms by return/hour to farm.

8. All Part-owner, Part-Tenant General Crop farms by Return/Hour to Farm.

9.* All Owner-Operator and Tenant-Landlord farms by Return/Hour to Corn Enterprise.

10.* All Owner-Operator and Tenant-Landlord farms by Return/Hour to Soybean Enterprise.

11.* All Owner-Operator and Tenant-Landlord farms by Return/Hour to Oats Enterprise.

12.* All Owner-Operator and Tenant-Landlord farms by Return/Hour to Wheat Enterprise.

13.* All Owner-Operator and Tenant-Landlord farms by Return/Hour to Alfalfa Enterprise.

14.* All Owner-Operator and Tenant-Landlord farms by Return/Hour to Clover Enterprise.

15.* All Owner-Operator and Tenant-Landlord farms by Return/Hour to Corn Silage Enterprise.

12 = Tobacco not summarized

SWINE

16.* All Owner-Operator and Tenant-Landlord Swine farms by Return/Hour to Farm.

Summaries printed for general distribution

17. All Tenant Swine farms ~~by Return/Hour to Farm.~~

18. All Owner-Operator and Tenant-Landlord farms by Return/Hour to Swine Enterprise.

19. ~~All Tenant farms by Return/Hour to Swine Enterprise.~~ Not summarized

BEEF

20. All Owner-Operator and Tenant-Landlord Beef Feed farms by Return/Hour to Farm.

21. All Tenant Beef Feed farms ~~by Return/Hour to Farm.~~

22. All Owner-Operator and Tenant-Landlord farms by Return/Hour to Beef Feed Enterprise.

23. All Owner-Operator and Tenant-Landlord farms by Return/Hour to Beef Breeding Enterprise.

SHEEP

24. All Owner-Operator and Tenant-Landlord farms by Return/Hour to Sheep Enterprise.

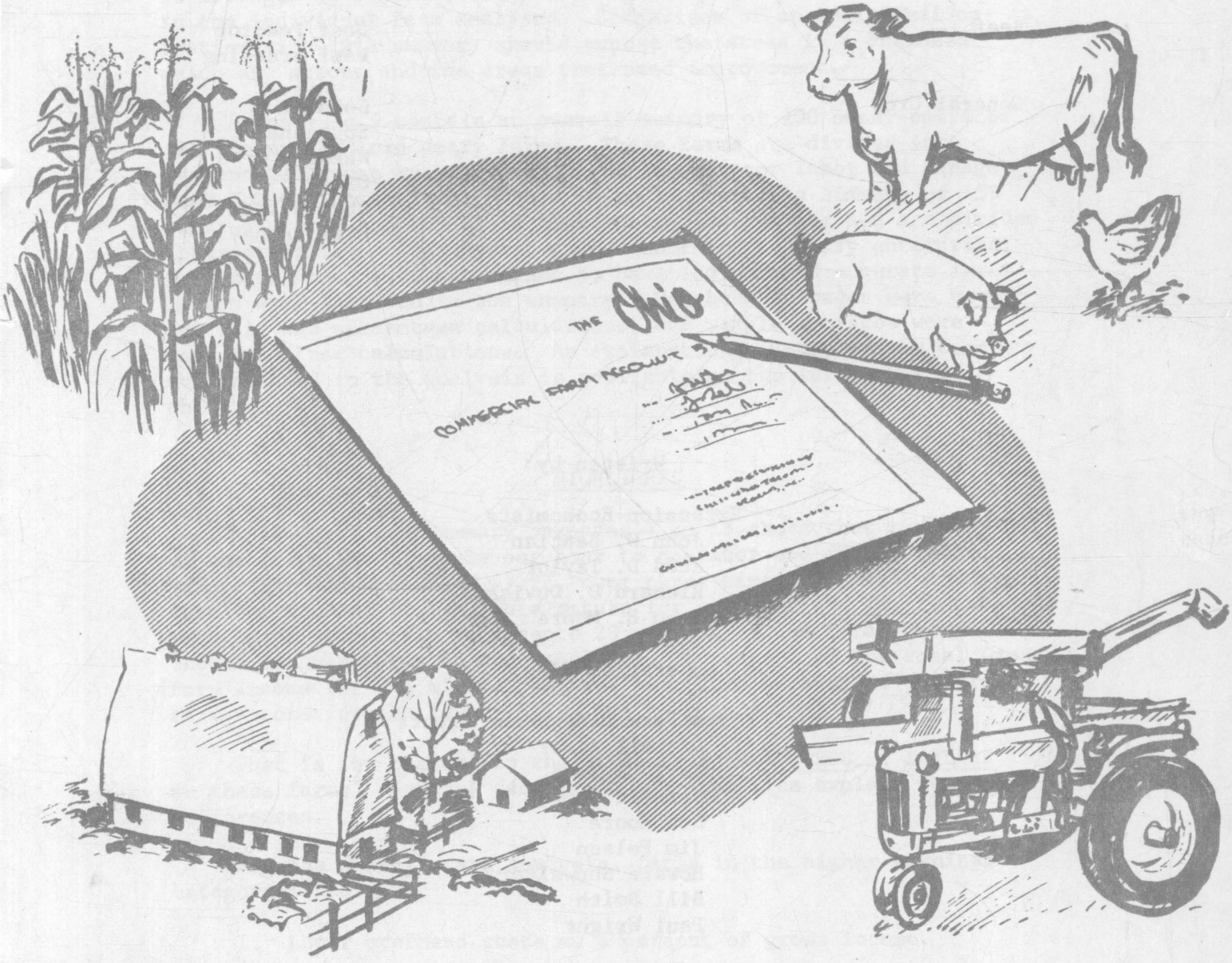
AREA AND COUNTY SUMMARIES

25. All Dairy Farms in County #85 by Return/Hour to farm.

26. All Dairy Farms in Area 7 by Return/Hour to farm.

Extension MM No. 324
ESO No. 102

1971
Farm Business Analysis Report
Dairy Summary



Department of Agricultural Economics and Rural Sociology
COOPERATIVE EXTENSION SERVICE
THE OHIO STATE UNIVERSITY
Columbus, Ohio

SUMMARIES AVAILABLE FOR 1971

TOTAL FARM SUMMARIES	ENTERPRISE SUMMARIES INCLUDED
Dairy	Dairy Milk
Swine	Swine
Beef	Beef Feeding Beef Breeding
General Crop	Corn Soybeans Wheat Oats Corn silage Alfalfa Hay

Written by:

Extension Economists
John W. Bastian
Reed D. Taylor
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In Cooperation With:

Area Farm Management Agents
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Herbert Crown
Don Moore
Jim Polson
Howard Showalter
Bill Smith
Paul Wright

County Agents
Vocational Agriculture teachers

1971 OHIO FARM BUSINESS ANALYSIS REPORT

DAIRY SUMMARY

This summary is designed to help farm businessmen improve their income. Each section is divided into four groups composed of the top 10%, top 25%, middle 50%, and lower 25% of the farms by return per hour to operator labor and management. The report is arranged in a format similar to the computer printout received in the individual farm analyses. Comparison of an individual operation with this summary should expose the areas in a business which are strong and the areas that need improvement.

Pages 4 to 9 contain an overall summary of 200 owner-operator and tenant-landlord dairy farms. These farms are divided into percentage groups by return per hour to operator labor and management for the total farm. Pages 10 to 13 contain a summary of 159 owner-operator and tenant-landlord dairy enterprises and are divided into percentage groups by return per hour to the dairy enterprise. Only data from farms determined to have logical and accurate information were included in the summary. Weighted averages were used for unit and percentage calculations, and simple averages were used for other calculations. An explanation of many of the computations used in the analysis is available on the last pages of this report.

HIGHLIGHTS

A study of the summary on pages 4 to 13 shows that the top 10% of the farms had a return per hour to operator and family labor, management and profit of $7.22, over three times the middle 50% return per hour of $2.14. This return for operator and family labor, management and profit represents 29 percent of the total Gross Farm Income for the farms in the upper 10%, 20 percent of the total Gross Farm Income for the middle 50%, and near zero percent of the Gross Farm Income for the lower 25%.

What is the reason for the difference in SUCCESS or FAILURE on these farms? Several factors in the summaries explain these differences.

For the overall farm analysis, farms in the higher earnings catagories had:

1. Lower overhead costs as a percent of gross income.

2. Lower machine investment per crop acre and lower machine cost per crop acre.

3. Greater gross farm income per farm and per man.

4. Higher return per dollar feed fed.

5. Higher value of production per crop acre.

6. More crop acres.

7. More hired labor and higher hourly wage rates paid to hired labor.

8. Higher gross income per $1,000 invested.

9. Higher profit margin. (Management Income and Profit plus interest ÷ Gross Income)

10. Higher percent return on investment. (Management Income and Profit plus interest ÷ Total Investment)

Of all the farms that were analyzed, 159 had dairy and milk enterprises that were included in the summary. (See pages 10 through 13 for more detail). For these enterprises, the higher percentage catagories had:

1. Higher return per dollar of feed fed.

2. Higher milk production per cow.

3. Greater gross return per cow for milk sold and for increase in value of dairy animals.

4. Greater value per cwt milk sold.

5. Higher average price received for milk.

6. Lower feed cost per cwt milk sold.

7. Lower labor requirement per cow.

8. Greater number of cows.

9. Lower total investment per cow.

10. Higher profit margin. (Management Income and Profit plus interest ÷ Gross Income)

11. Greater return on investment. (Management Income and Profit plus interest ÷ Total Investment)

SUCCESS or FAILURE depends on whether the business:

1. IS MAKING A PROFIT on each dollar of output.

   Is the cropping program geared to produce maximum net return per crop acre?

   Does the dairy operation produce maximum return per dollar of feed fed?

   Is machine cost per crop acre low enough to permit a profit?

2. HAS ENOUGH VOLUME.

   Is there enough volume to provide a satisfactory income potential?

   Is the business big enough to carry the investment and overhead cost in equipment, facilities and other capital resources?

   Is the business big enough to provide productive and profitable employment for labor resources?

The high income operators out-performed their competition in both of these catagories. They managed larger businesses, accomplished more per worker, and used capital resources more effectively. They excelled in output per acre and in performance of livestock enterprise.

No one factor can be singled out as the basic difference between high and low income farms. For each of the efficiency measures studied, some farms in the low income group ranked near the top. SATISFACTORY INCOMES were the result of above average performance "ACROSS THE BOARD", rather than outstanding achievement in only one or two departments.

1971 OHIO FARM BUSINESS ANALYSIS REPORT

OVERALL DAIRY FARM SUMMARY

200 OWNER-OPERATOR & TENANT-LANDLORD FARMS

	Rank by Family Labor & Management Income/Hour to Farm				
	Top 10%	Top 25%	Middle 50%	Lower 25%	My farm
Number of Farms	20	50	100	50	
INCOME					
Cash Receipts	$79,663	$64,170	$41,013	$39,509	
Capital Gains and Losses	6,625	5,150	3,081	2,265	
Inventory Changes	9,311	6,673	3,004	1,205	
- Feeder Livestock	-175	-788	-290	-1,526	
Gross Farm Income	95,424	75,206	46,809	41,453	
EXPENSES					
Cash Expenses	49,496	39,792	27,376	31,705	
Depreciation	9,529	7,692	5,379	5,934	
Interest Not Charged	8,576	6,848	5,078	5,399	
Unpaid Operator & Family Labor	12,032	11,389	10,835	9,216	
- Feeder Livestock	-175	-788	-290	-1,526	
Total Farm Expense	79,459	64,934	48,379	50,728	
MANAGEMENT INCOME & PROFIT					
Total	15,964	10,271	-1,569	-9,274	
As a Percent of Gross Income	16.7	13.7	-3.4	-22.4	
UNPAID OPERATOR & FAMILY LABOR					
Total	12,032	11,389	10,835	9,216	
As a Percent of Gross Income	12.6	15.1	23.1	22.2	
OVERHEAD COSTS					
Total	27,738	22,569	15,786	17,524	
As a Percent of Gross Income	29.1	30.0	33.7	42.3	
VARIABLE COSTS					
Total	39,688	30,975	21,756	23,988	
As a Percent of Gross Income	41.6	41.2	46.5	57.9	
NET CASH INCOME	30,166	24,377	13,637	7,803	
NET FARM INCOME	36,574	28,509	14,343	5,340	
INVESTMENT					
Total	183,546	157,139	116,409	138,526	
Return to Investment	26,977	19,699	5,414	-963	
Percent Return on Investment	14.7	12.5	4.7	-0.7	
Gross Income Per $1,000 Invested	519.89	478.59	402.10	299.24	
LABOR EFFICIENCY FACTOR	1.079	.974	.769	.768	
TOTAL LABOR & MANAGEMENT INCOME					
Total	27,997	21,661	9,265	-58	
Hour	7.22	5.34	2.14	-.01	

1971 Ohio Farm Business Analysis Report

Overall Dairy Farm Summary

CAPITAL GAIN	Top 10%	Top 25%	Middle 50%	Lower 25%	My farm
Raised Breeding Stock	$ 6,296	$ 4,990	$ 2,857	$ 2,116	
Purchased Breeding Stock	225	11	46	66	
Machinery and Equipment	104	150	178	83	
Total Capital Gain or Loss	6,625	5,150	3,081	2,265	
NET INVENTORY CHANGE					
Raised Breeding Livestock	6,041	3,993	2,190	313	
Market Livestock	452	234	405	904	
Grain, Hay, Supplement	2,576	2,300	323	-90	
Supplies and Fertilizer	241	145	85	78	
Total Inventory Change	9,311	6,673	3,004	1,205	
DEPRECIATION					
Buildings, Fence, Etc.	3,007	2,406	1,576	1,485	
Machinery and Equipment	6,180	4,965	3,424	3,781	
Purchased Breeding Stock	342	320	378	668	
Total Depreciation	9,529	7,692	5,379	5,934	
CAPITAL INVESTMENT					
Purchased Breeding Stock	2,881	2,542	3,790	5,402	
Raised Breeding Stock	33,965	28,344	17,978	17,581	
Market Livestock	1,193	1,721	1,320	1,630	
Grain and Hay	16,552	12,774	8,201	8,162	
Supplies and Fertilizer	949	542	460	221	
Machinery and Equipment	27,082	24,166	18,251	18,781	
Buildings, Fence, Tile	39,375	31,837	19,915	22,557	
Land (Current Ag. Value)	61,545	55,210	46,490	64,189	
Total Capital Investment	183,546	157,139	116,409	138,526	
RATIO ANALYSIS					
Profit Margin	.283	.262	.116	-.023	
Turnover	.520	.479	.402	.299	
Return on Investment	.147	.125	.047	-.007	

1971 Ohio Farm Business Analysis Report

Overall Dairy Farm Summary

CASH RECEIPTS	Top 10%	Top 25%	Middle 50%	Lower 25%	My farm
Milk and Cream	$65,179	$52,081	$33,125	$31,526	
Poultry and Eggs		111	406	157	
General Crops	6,354	4,165	1,597	1,689	
Special Crops	257	229	726	549	
Cash Rent and Royalties	855	460	117	100	
Labor Off Farm	274	127	38	74	
Custom Work	404	265	171	926	
Wool	41	24	13	5	
Other Livestock Products	821	493	82	46	
Tax Refund	240	157	101	109	
Patronage Dividend	251	174	97	94	
Breeding Fees Received			20		
Miscellaneous Receipts	646	578	149	236	
Government Payments	1,804	1,209	635	629	
Government Crop Payments	227	230	268	163	
Market Livestock					
Swine	354	654	1,639	828	
Cattle	685	2,469	1,216	1,988	
Veal Calves	1,122	686	488	365	
Lambs	140	56	121	23	
Total Cash Receipts	79,663	64,170	41,013	39,509	
CASH EXPENSES					
Hired Labor	7,719	5,053	2,368	2,887	
Feed Purchased	11,491	9,820	7,897	9,007	
Farm Supplies	2,177	1,518	1,140	1,258	
Machinery Repairs	2,837	2,374	1,624	1,899	
Bldg., Fence, Tile, Etc. Repairs	1,082	1,114	776	907	
Fuel, Oil, and Grease	2,065	1,628	1,197	1,366	
Electricity (Farm Share)	763	650	501	503	
Telephone (Farm Share)	139	120	98	141	
Miscellaneous Expenses	1,020	773	523	516	
Seeds and Plants	1,636	1,301	938	818	
Fertilizer and Lime	5,566	4,391	3,180	2,798	
Machine Hire and Trucking	1,293	987	604	1,150	
Auto Expense (Farm Share)	617	470	285	265	
Interest on Notes and Mortgage	2,435	2,579	1,906	2,911	
Veterinary and Medicine	1,111	823	672	690	
Breeding Fees and Registration	1,246	1,059	724	682	
Feeder Livestock Purchase	175	788	290	1,526	
Taxes	2,105	1,722	1,182	1,129	
Cash Rent	3,152	1,873	963	698	
Insurance	856	738	500	543	
Total Cash Expenses	49,496	39,792	27,376	31,705	

1971 Ohio Farm Business Analysis Report

Overall Dairy Farm Summary

LABOR EFFICIENCY Reported Labor Used On Farm	Top 10%	Top 25%	Middle 50%	Lower 25%	My farm
Operators Labor Used					
Hours	2,895.3	2,994.6	3,100.8	2,944.0	_____
Value/Hr	$3.08	$2.84	$2.53	$2.19	_____
Hours	562.5	569.0	691.1	579.7	_____
Value/Hr	$3.25	$2.93	$2.37	$1.90	_____
Unpaid Family Labor Used					
Wife					
Hours	299.0	344.5	495.8	530.2	_____
Value/Hr	$2.08	$2.10	$1.97	$1.71	_____
Family Labor Over 14					
Hours	165.0	223.2	130.0	387.4	_____
Value/Hr	$1.41	$1.62	$1.47	$1.39	_____
Family Labor Under 14					
Hours	94.5	81.2	55.6	253.0	_____
Value/Hr	$1.12	$1.15	$1.02	$.88	_____
Hired Labor					
Hours	3,433.6	2,446.6	1,487.0	1,535.9	_____
Value/Hr	$2.25	$2.07	$1.59	$1.88	_____
Number of Man Equivalent Hours Used	7,309	6,505	5,807	5,920	_____
Number of PMWU Used	730	650	580	592	_____
Number of Man-Year Equivalents Used	2.43	2.16	1.93	1.96	_____
Value of Operators Labor Used	$11,000	$10,215	$9,576	$7,537	_____
Value of Unpaid Family Labor Used	$1,032	$1,173	$1,259	$1,678	_____
Value of Hired Labor Used	$7,719	$5,053	$2,368	$2,887	_____
Value of Total Labor	$19,752	$16,442	$13,204	$12,104	_____
Value of Labor Per Man Hour Equivalent	$2.70	$2.52	$2.27	$2.04	_____
Value of Labor Per PMWU	$27.05	$25.29	$22.76	$20.48	_____
Value of Labor Per Man-Year Equivalent	$8,128	$7,612	$6,841	$6,175	_____

1971 Ohio Farm Business Analysis Report

Overall Dairy Farm Summary

CROPS SUMMARY Crop Production*	Top 10%	Top 25%	Middle 50%	Lower 25%	My farm
Corn					
Acres	89	74	52	45	
Yield	88 bu.	88 bu.	91 bu.	77 bu.	
Soybeans					
Acres	41	19	6	7	
Yield	28 bu.	27 bu.	28 bu.	28 bu.	
Oats					
Acres	25	19	11	12	
Yield	84 bu.	75 bu.	67 bu.	66 bu.	
Wheat					
Acres	16	15	10	10	
Yield	39 bu.	38 bu.	36 bu.	37 bu.	
Alfalfa					
Acres	27	26	14	9	
Yield	3.6 T.	3.6 T.	3.4 T.	3.2 T.	
Clover					
Acres	16	19	22	29	
Yield	2.9 T.	3.1 T.	2.9 T.	2.5 T.	
Green Chop					
Acres	4	4	3	4	
Yield	12.0 T.	7.7 T.	11.9 T.	9.4 T.	
Corn Silage					
Acres	54	42	25	32	
Yield	16.8 T.	16.5 T.	15.6 T.	13.8 T.	
Haylage					
Acres	43	29	13	12	
Yield	8.3 T.	8.8 T.	6.5 T.	6.1 T.	
General Crop Acres	325	256	172	171	
Total Harvested Crop Acres	353	273	184	181	
Value of General Crops	$33,548	$25,594	$15,422	$14,789	
Value of All Crops	$35,507	$26,936	$16,775	$16,085	
General Crop Prod. Value/Acre	$103.22	$ 99.97	$ 89.66	$ 86.48	
All Crop Prod. Value/Acre	$100.58	$ 98.66	$ 91.16	$ 88.86	
Percent of Gen. Crops in Corn and Soybeans	56.6	52.7	48.3	49.1	
Percent Total Tillable Acres in Corn and Soybeans	50.5	49.2	43.9	45.4	
Fertilizer and Lime Cost Per Acre	$ 15.29	$ 15.68	$ 16.83	$ 15.12	
Machinery Investment Per Crop Acre	$ 74.40	$ 86.31	$ 96.57	$101.52	
Total Power and Machinery Cost	$14,214	$11,610	$ 8,059	$ 8,663	
Machinery Cost Per Crop Acre	$ 39.05	$ 41.46	$ 42.64	$ 46.83	

* A few farms produced crops such as barley, other hay or sweet corn which were not included in this list.

1971 Ohio Farm Business Analysis Report

Overall Dairy Farm Summary

LIVESTOCK SUMMARY	Top 10%	Top 25%	Middle 50%	Lower 25%	My farm
Total Value of Feed Fed to all Livestock Enterprises	$36,173	$36,504	$20,813	$21,578	_____
Value of Net Livestock Increase	$80,066	$64,459	$41,532	$36,907	_____
Returns Per $ Feed Fed to all Livestock Enterprises	$2.21	$1.77	$2.00	$1.71	_____

1971 Ohio Farm Business Analysis Report

159 Dairy Enterprises

	Top 10%	Top 25%	Middle 50%	Lower 25%	My farm
NUMBER OF FARMS	15	39	79	41	
GENERAL INFORMATION					
Number of Cows	77.8	69.9	48.5	51.2	
Number of Cows Per Man Equivalent	45.4	43.6	33.6	34.8	
Dairy Returns Per $ Feed Fed	$2.39	$2.26	$2.11	$1.57	
PER COW INFORMATION (The following information is on a per cow basis)	Per cow	Per cow	Per cow	Per cow	
Productive Man Work Units	6.59	6.87	8.91	8.61	
Value of Labor Used	$165.26	$174.32	$197.71	$190.20	
Value of Production					
Dairy Increase	$164.51	$165.15	$114.64	$38.93	
Milk Sold	$820.39	$798.35	$734.19	$661.58	
TOTAL VALUE OF PRODUCTION	$984.90	$963.51	$848.82	$700.53	
Cash Expenses					
Hired Labor	$60.64	$45.51	$27.46	$35.35	
Feed Purchased	$117.33	$136.85	$159.48	$150.66	
Farm Supplies	$8.77	$9.73	$9.34	$11.70	
Machine Repairs	$9.27	$8.74	$5.44	$8.05	
Build Fence Etc.	$11.05	$11.17	$14.41	$13.36	
Fuel Oil & Grse.	$5.57	$5.12	$3.38	$5.45	
Electric	$8.61	$8.25	$8.99	$10.98	
Telephone	$.89	$.99	$1.34	$1.50	
Misc. Expense	$6.45	$5.55	$5.67	$5.20	
Machine Hired Trk.	$9.38	$6.45	$7.44	$9.10	
Auto Expense	$3.47	$3.52	$2.72	$2.73	
Interest on Notes	$10.87	$14.94	$15.11	$32.79	
Vet. Medicine	$13.89	$14.32	$12.04	$14.20	
Breeding Fees	$16.34	$16.12	$15.75	$15.61	
Taxes	$10.85	$10.30	$8.89	$9.39	
Rent	$.45	$.66	$2.76	$7.36	
Insurance	$6.77	$6.58	$6.23	$8.50	
Total Cash Expenses	$300.61	$304.81	$306.47	$341.93	

1971 Ohio Farm Business Analysis Report

Dairy Enterprise Summary (cont.)

	Top 10%	Top 25%	Middle 50%	Lower 25%	My farm
Non-Cash Expenses					
Depreciation					
Bldg. Fence Tile	$21.05	$24.74	$22.33	$28.65	
Machinery & Equip.	$20.63	$21.85	$20.39	$28.36	
Purchased Brdg. Stk.	$2.57	$4.69	$7.05	$13.18	
Total Depreciation	$44.25	$51.27	$49.77	$70.20	
Unpaid Opr. and Fam. Labor	$106.95	$129.99	$170.21	$154.92	
Interest Not Charged	$42.15	$41.70	$45.05	$35.94	
Home Grown Feeds	$272.13	$280.33	$243.63	$300.50	
Total Non-Cash Expenses	$465.68	$503.53	$508.93	$561.76	
TOTAL EXPENSES OF PRODUCTION	$766.29	$808.34	$815.40	$903.69	
Management Income and Profit	$218.61	$155.16	$33.42	-$203.16	
Value of Production - Cash Expenses	$575.35	$654.76	$541.86	$357.79	
Total Investment	$883.93	$944.39	$1,003.48	$1,146.00	
Return on Investment	$271.65	$211.83	$93.63	-$134.39	
Percent Return on Investment	30.7%	22.4%	9.33%	-11.7%	
Total Feed Costs	$419.27	$428.77	$401.16	$445.24	
Feed Required					
Value of Supplement	$104.52	$106.48	$109.18	$107.89	
Value of Grain	$113.55	$120.53	$107.28	$117.68	
Value of Roughages	$201.18	$201.49	$184.68	$219.65	
Return to Unpaid Operator and Family Labor, Management and Profit					
Total	$325.57	$285.17	$203.65	$-48.22	
Per Hour	$9.03	$6.29	$2.82	-$.72	
RATIO ANALYSIS					
Profit Margin	.276	.220	.110	-.192	
Turnover*	1.114	1.020	.846	.611	
Return on Investment	.307	.224	.093	-.117	

* The turnover ratio (or gross income per dollar invested) for the dairy enterprise is much higher than the same figure for the total farm. One of the major reasons for this is that the dairy enterprise purchased feed from the farm at market price, but no investment is included in the dairy enterprise for producing the feed. Therefore, the gross income to the dairy enterprise is high and the investment is relatively low, resulting in a high turnover figure.

1971 Ohio Farm Business Analysis Report

159 Milk Enterprises

	Top 10%	Top 25%	Middle 50%	Lower 25%	My farm
NUMBER OF FARMS	15	39	79	41	
GENERAL INFORMATION					
Number of Cows	77.8	69.9	48.5	51.2	
Pounds of 3.5 Milk Sold	1,112,058	988,636	637,164	627,171	
Pounds of 3.5 Milk Sold Per Cow	14,294	14,143	13,138	12,248	
Pounds of Milk Sold Per Man Equivalent	783,139	748,967	512,602	452,178	
Value of Milk Sold Per Cow	$820	$798	$734	$661	
Feed Costs for Milk Per Cow	$342	$351	$346	$420	
Milk Sales As a % of Gross Farm Income	72.6	74.8	74.6	78.5	
Milk Sales as a % of Dairy Value	83.2	82.8	86.4	94.4	
Percent of Dairy Feed Charged to Milk Production	83.2	82.8	86.4	94.4	
PER CWT OF MILK PRODUCED* (The following information is on a per cwt. milk sold basis)	Per cwt	Per cwt	Per cwt	Per cwt	
Productive Man Work Units	.04	.04	.06	.07	
Value of Labor Used	$.962	$1.02	$1.30	$1.47	
VALUE OF MILK SOLD	$5.74	$5.64	$5.59	$5.40	
Cash Expenses					
Hired Labor	$.35	$.27	$.18	$.27	
Feed Purchased	$.68	$.80	$1.05	$1.16	
Farm Supplies	$.05	$.06	$.06	$.09	
Machine Repairs	$.05	$.06	$.04	$.06	
Build Fence Etc.	$.06	$.07	$.09	$.10	
Fuel, Oil & Grse.	$.03	$.03	$.02	$.04	
Electric	$.05	$.05	$.06	$.08	
Telephone	$.01	$.01	$.01	$.01	
Misc. Expense	$.04	$.03	$.04	$.04	
Machine Hired Trk.	$.06	$.04	$.05	$.07	
Auto Expense	$.02	$.02	$.02	$.02	
Interest on Notes	$.06	$.09	$.10	$.25	
Vet Medicine	$.08	$.08	$.08	$.11	
Breeding Fees	$.10	$.09	$.10	$.12	

* All figures listed in the remainder of the milk enterprise are for milk and cream sales only. Changes in inventory value of dairy animals and sale of dairy animals are left out of the calculation. For example, for milk enterprises in the middle 50%, all figures following "Per cwt" represent 86.4% of the corresponding figures from the dairy enterprise.

1971 Ohio Farm Business Analysis Report

Milk Enterprise Summary (cont.)

	Top 10%	Top 25%	Middle 50%	Lower 25%	My farm
Taxes	$.06	$.06	$.06	$.07	_____
Rent	$.00	$.00	$.02	$.06	_____
Insurance	$.04	$.04	$.05	$.07	_____
Total Cash Expenses	$1.75	$1.79	$2.02	$2.64	_____
Depreciation					
Bldg. Fence Tile	$.12	$.14	$.15	$.22	_____
Machinery & Equip.	$.12	$.13	$.13	$.22	_____
Purchased Brdg. Stk.	$.15	$.03	$.05	$.10	_____
Total Depreciation	$.26	$.30	$.33	$.54	_____
Unpaid Opr. & Fam. Labor	$.62	$.76	$1.12	$1.19	_____
Interest Not Charged	$.25	$.24	$.30	$.28	_____
Home Grown Feeds	$1.58	$1.64	$1.60	$2.31	_____
Total Non-Cash Expenses	$2.71	$2.94	$3.35	$4.32	_____
TOTAL COST OF MILK SOLD	$4.46	$4.73	$5.36	$6.96	_____
Management Income and Profit	$1.27	$.91	$.22	-$1.57	_____
Value of Production - Cash Expenses	$3.93	$3.83	$3.56	$2.76	_____
Total Investment	$5.15	$5.53	$6.60	$8.83	_____
Return on Investment	$1.58	$1.24	$.62	-$1.04	_____
Percent Return on Investment	30.73%	22.43%	9.33%	-.12%	_____
Total Feed Costs	$2.44	$2.51	$2.64	$3.43	_____
Feed Required					
Value of Supplement	$.61	$.62	$.72	$.83	_____
Value of Grain	$.66	$.70	$.70	$.90	_____
Value of Roughages	$1.17	$1.19	$1.21	$1.69	_____
Return to Unpaid Operator and Family Labor, Management and Profit					
Total	$1.89	$1.67	$1.34	-$.37	_____
Per Hour	$7.13	$5.22	$2.38	-$.85	_____

MAJOR IMPROVEMENTS

Two major improvements have been added to the farm records analysis: an expanded enterprise analysis, and a ratio analysis. The enterprise analysis examines the dairy enterprise and the milk enterprise as if each were a separate business. The ratio analysis examines three key areas of a business to help determine how it compares with other businesses. These ratio analysis figures are located at the bottom of page 5 for the total farm summary and page 11 for the dairy enterprise.

The enterprise analysis section, which starts on page 10 of this summary, gives an item by item breakdown of cost and income information for the dairy and milk enterprises. Data for each enterprise summary is taken from farms which had the cost and production information necessary to receive an analysis of the dairy enterprise.

HOW TO USE THE RATIO ANALYSIS SECTION

The ratio analysis section permits a comparison of a business with larger or smaller businesses. Comparison of these ratio figures with state summary figures will quickly indicate how a farm or a particular enterprise compares with others in the state concerning "profit margin", "turnover", and "return on investment".

The "return on investment" figure, called MANAGEMENT INCOME AND PROFIT + PAID AND UNPAID INTEREST ÷ TOTAL INVESTMENT in the printout, gives a good indication of how well the investments in a business are working. If the return on investment figure for a particular business or enterprise is low, that investment is not returning as much as other similar investments in the state. A closer examination of return on investment can easily be made by looking at the "profit margin" and "turnover" ratios.

The "profit margin" ratio, referred to as MANAGEMENT INCOME AND PROFIT + PAID AND UNPAID INTEREST ÷ GROSS INCOME on the individual printout, is a measure of the profitability of a business. If the figure is low, the farm or enterprise has less profit for each dollar of product sold than other similar farms or enterprises in the state. This may indicate that expenses are high or sale price is low, or both. A look at income figures such as VALUE PER CWT OF MILK SOLD or RETURN PER $ FEED FED and at cost figures per unit will provide a better idea of what is causing profit margin to be low.

The "turnover" ratio called GROSS INCOME ÷ TOTAL INVESTMENT in the individual printout, is a measure of how well investments are being utilized. If the "turnover" ratio is low, the farm or enterprise has less sales for each dollar invested than the farms or enterprises in the state summary. Turnover can be examined more closely by looking at receipts and investments. Such items as TOTAL VALUE OF PRODUCTION PER COW or GENERAL CROP PRODUCTION VALUE PER ACRE will indicate how an individual farm's receipts compare with those in the state summary. Investments can be examined more closely by comparing such figures as TOTAL INVESTMENT PER CWT MILK SOLD or MACHINERY INVESTMENT PER CROP ACRE with state summary figures.

An example of how these ratios can be used follows.

EXAMPLE:

Dairy farmer John Doe has a Return on Investment ratio of .100 (or a return on investment of 10%) for his farm. He compares this return

with those in the state summary, and finds that his farm is slightly below the top 25%, but well above the middle 50%. John decides that he wants to improve his return on investment to the farm. To see where improvements should be made, he compares the two other ratios for his farm with those in the state summary. His profit margin ratio is .260 (or profit and interest per dollar of gross farm income is 26¢), slightly above the average of farms in the upper 25%. However, his turnover ratio is .385 (or gross farm income per $1,000 invested of $385), less than the middle 50% average in the summary. John would like to improve both of these ratios, but since the turnover ratio is low, he feels it probably holds the most promise for improvement.

To see how his turnover may be improved, John looks at several factors. He finds that his return per crop acre is $86, near the lower 25% average. His machinery investment per crop acre is near the middle 50% at $97.00 per crop acre. To further examine his crop situation, he examines the crops grown and yield per acre listed in the summary. John thinks that several improvements can be made in his crop operation such as growing less oats and clover, growing more corn, soybeans and alfalfa, improving yield per acre, and renting more crop land.

Next John looks at his livestock enterprise. He finds that his return per dollar of feed fed of $2.10 is near the top 25% of the farms for the overall farm summary. However, he has only dairy livestock and finds that a return of $2.10 for each dollar of feed fed is below average when compared with the dairy enterprise. (Returns per dollar of feed fed to hogs and beef is normally less than $2.00). He looks further and finds that his total return per cow of $850 is near the middle 50% and that his milk production of 12,500 pounds per cow is

below average. His investment per cow is in line with the top 25% at $950 per cow. John thinks he can improve production per cow to increase return per dollar of feed fed, return per cow, and dairy profit.

John looks at several other factors and decides he can improve his farm business in several ways, including an increase in gross income per cow and per crop acre and an increase in crop acres, while keeping cost increases relatively low. This should improve his turnover as well as his profit margin, and thereby increase his return on investment.

Use of these ratios will permit fast identification of trouble spots and help to locate what is causing them. For questions concerning this analysis, contact the county agent or farm management area agent in your area.

GLOSSARY OF SELECTED TERMS*

GROSS FARM INCOME - is the sum of all cash receipts plus increases in inventory and capital gains less decreases in inventory, capital losses, and feeder livestock purchases.

INTEREST NOT CHARGED - represents an estimated charge for equity capital. It is determined by taking six percent of total investment and subtracting the amount of interest paid during the year. This calculation makes a similar charge for the total investment of each farm business.

UNPAID OPERATOR & FAMILY LABOR - is the wage charge for the operator and unpaid family labor using the time worked and rates per hour estimated by the farm operator.

TOTAL FARM EXPENSE - is the sum of all cash and non-cash expense for the farm less the cost of purchased feeder livestock. Non-cash expense includes depreciation, interest not charged and unpaid operator and family labor charge.

MANAGEMENT INCOME & PROFIT - equals Gross Income minus Total Farm Expense. This represents the return to management income and profit after all cash and non-cash expenses are deducted.

FAMILY LABOR & MANAGEMENT INCOME - equals Management Income and Profit plus Unpaid Operator and Family Labor. This represents the return to the operator and his family for their unpaid labor, management and profit.

NET FARM INCOME - equals Family Labor and Management Income plus Interest Not Charged. This represents the return to the operator for equity capital, unpaid labor, management and profit.

RETURN TO INVESTMENT - equals Management Income and Profit plus paid and unpaid interest. Paid and unpaid interest equals six percent of Total Investment. This represents the return to all capital, owned and borrowed, plus management and profit. This return times 100 divided by Total Investment gives Percent Return On Investment.

OVERHEAD COSTS - is the sum of depreciation, building repairs, interest paid, property taxes, cash rent, insurance and interest not charged. These represent costs that are essentially fixed and must be recovered regardless of the level of production.

VARIABLE COSTS - is the sum of all cash expenses other than those included in Overhead Costs. These costs vary with the level of production.

NUMBER OF MAN-YEAR EQUIVALENTS - represents the number of full-time man equivalents available on the farm for the entire year. Family labor is adjusted to a man-equivalent basis. One man-year equivalent is 3,000 hours.

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* A complete listing of calculations is contained in occasional paper #49, "A Guide To Interpretation of the Computer Printout".

VALUE OF ALL CROPS - represents all crop production valued at market price (not necessarily sold) plus government crop payments.

VALUE OF NET LIVESTOCK INCREASE - is the net value of livestock and livestock products produced during the year. This includes livestock sold less value of feeder livestock plus change in inventory.

RETURN PER $ FEED FED TO ALL LIVESTOCK ENTERPRISES - equals the Value of Net Livestock Increase divided by the Total Value of Feed Fed to All Livestock. The returns per dollar of feed fed should pay for the feed, labor, overhead on buildings and equipment required by livestock, other production costs, and provide a profit.

MACHINERY COST PER CROP ACRE - is the sum of fuel, oil, grease, repairs, and machine hire expenditures plus charges for depreciation and investment, less custom work receipts divided by acres of cropland.

PROFIT MARGIN RATIO - equals Management Income and Profit plus paid and unpaid interest divided by gross income. This ratio shows the dollars of profit and interest received from each dollar of gross income.

TURNOVER RATIO - equals Gross Income divided by Total Investment. This ratio is the same as Gross Income Per $1,000 Invested figure, but is given as a decimal figure rather than a return per $1,000. It gives the dollars of gross income received during the year for each dollar of investment.

RETURN ON INVESTMENT RATIO - equals Management Income and Profit plus paid and unpaid interest divided by Total Investment. This ratio is the same as Percent Return On Investment, but is stated as a decimal rather than a percentage. It gives the dollars of profit and interest received during the year for each dollar of investment.

SAMPLE POPULATION

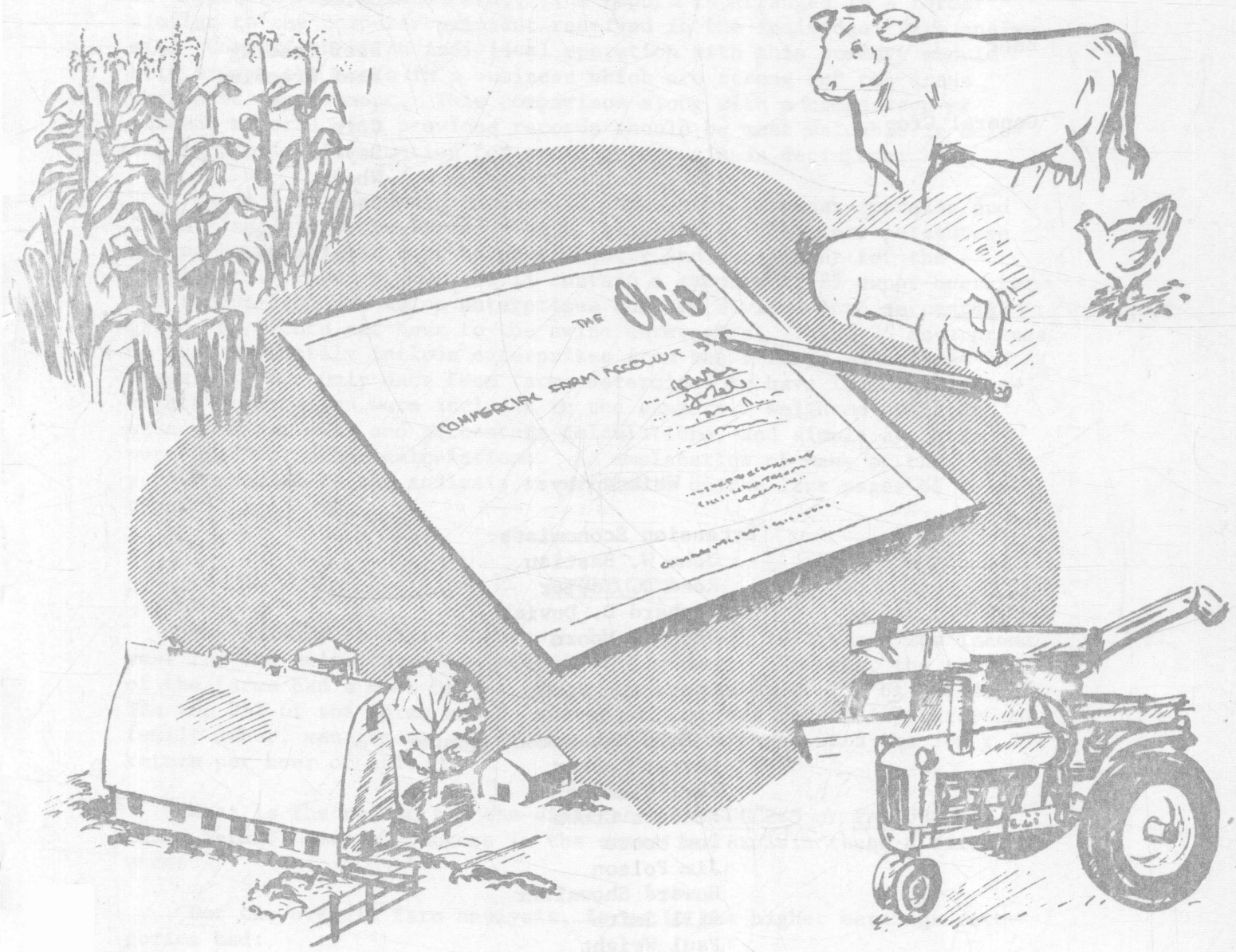
The 200 owner-operator and tenant-landlord dairy farm records summarized in this report are part of the 462 farm records of all types submitted by Ohio farmers to Ohio State University for analysis in 1971. Not all farm records were complete and accurate enough to be used in the summaries.

SUMMARY DATA

All data included in the tables are either simple averages for all farms in the group or weighted averages comparing two simple averages for that group. For example, Total Crop Acres is a simple average representing the total number of crop acres for any particular group of farms divided by the number of farms in the group. However, Machinery Cost Per Crop Acre is a weighted average calculated by dividing the average Total Machinery Cost for any particular group by the average Total Crop Acres for that group.

Extension MM No. 325
ESO No. 103

1971
Farm Business Analysis Report
Swine Summary



Department of Agricultural Economics and Rural Sociology
COOPERATIVE EXTENSION SERVICE
THE OHIO STATE UNIVERSITY
Columbus, Ohio

SUMMARIES AVAILABLE FOR 1971

TOTAL FARM SUMMARIES	ENTERPRISE SUMMARIES INCLUDED
Dairy	Dairy Milk
Swine	Swine
Beef	Beef Feeding Beef Breeding
General Crop	Corn Soybeans Wheat Oats Corn silage Alfalfa Hay

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1971 OHIO FARM BUSINESS ANALYSIS REPORT

SWINE SUMMARY

This summary is designed to help farm businessmen improve their income. Each section is divided into three groups composed of the top 25%, middle 50%, and lower 25% of the farms by return per hour to unpaid labor and management. The report is arranged in a format similar to the computer printout received in the individual farm analysis. Comparison of an individual operation with this summary should help expose the areas in a business which are strong and the areas that need improvement. This comparison along with a comparison of current records with previous records should be most valuable in helping to provide information for profitable business decisions.

Pages 4 to 8 contain an overall summary of 12 owner-operator and tenant-landlord swine farms. These farms are divided into percentage groups by return per hour to unpaid labor and management for the total farm. Pages 9, 10, and 11 contain a summary of 25 owner-operator and tenant-landlord swine enterprises and are divided into percentage groups by return per hour to the swine enterprise. These 25 enterprises do not necessarily include enterprises from the 9 farms summarized on pages 4 to 8. Only data from farms determined to have logical and accurate information were included in the summary. Weighted averages were used for unit and percentage calculations, and simple averages were used for other calculations. An explanation of many of the computations used in the analysis is available on the last pages of this report.

HIGHLIGHTS

The summary on pages 4 through 11 shows that 1971 was a low income year for the swine farms included in the summary. However, the top 25% of the farms had a much better year than did the lower 25% of the farms. The top 25% of the farms had an average return per hour to operator and family labor, management and profit of $2.18 compared with the lower 25% return per hour of -$1.30.

What is the reason for the difference in SUCCESS or FAILURE on these farms? Several factors in the summaries explain these differences.

For the overall farm analysis, farms in the higher earnings categories had:

1. Lower overhead costs as a percent of gross income.
2. Greater gross farm income per farm and per man.
3. Higher returns per dollar feed fed.

4. Greater gross income per $1,000 invested. (greater turnover)

5. Greater profit margin. (Management Income and Profit plus paid and unpaid interest ÷ Gross Income)

6. Greater percent return on investment. (Management Income and Profit plus paid and unpaid interest ÷ Total Investment)

Of all the farms that were analyzed, 25 had swine enterprises that were included in the summary. (See pages 9 through 11 for more detail). For these enterprises, the higher percentage categories had:

1. Greater return per dollar of feed fed.

2. Greater number of sows and guilts farrowing.

3. Greater number of feeder pigs sold.

4. Lower total expense per cwt pork produced.

5. Lower depreciation expense per cwt pork produced.

6. Lower total investment per cwt pork produced.

7. Greater turnover (Value of pork production per $1,000 invested in swine enterprise)

8. Greater profit margin. (Management Income and Profit plus interest ÷ Gross Income)

9. Greater return on investment. (Management Income and Profit plus interest ÷ Total Investment)

SUCCESS or FAILURE depends on whether the business:

1. IS MAKING A PROFIT on each dollar of output.

   Is the cropping program geared to produce maximum net return per crop acre?

   Does the swine operation produce maximum return per dollar of feed fed?

   Is machine cost per crop acre low enough to permit a profit?

2. HAS ENOUGH VOLUME.

   Is there enough volume to provide a satisfactory income potential?

   Is the business volume large enough to carry the investment and overhead cost in equipment, facilities and other capital resources?

Is the business large enough to provide productive and profitable employment for labor resources?

The high income operators out-performed their competition in both making a profit with each dollar of sales, and having enough volume for the amount of investment and labor available. They managed larger businesses, accomplished more per worker, and used capital resources more effectively. They excelled in performance of livestock enterprise.

No one factor can be singled out as the basic difference between high and low income farms. For each of the efficiency measures studied, some farms in the low income group ranked near the top. SATISFACTORY INCOMES were the result of above average performance "ACROSS THE BOARD", rather than outstanding achievement in only one or two departments.

1971 OHIO FARM BUSINESS ANALYSIS REPORT

OVERALL SWINE FARM SUMMARY

12 OWNER-OPERATOR & TENANT-LANDLORD SWINE FARMS

	Rank by Family Labor & Management Income Per Hour to Farm			
	Top 25%	Middle 50%	Lower 25%	My farm
Number of Farms	3	6	3	
INCOME				
Cash Receipts	$43,993	$32,584	$12,963	
Capital Gains and Losses	1,820	2,038	83	
Inventory Changes	4,488	2,033	3,424	
- Feeder Livestock Purchased		-1,416	-372	
Gross Farm Income	50,301	35,240	16,099	
EXPENSES				
Cash Expenses	34,725	24,705	15,219	
Depreciation	5,059	3,945	2,323	
Interest Not Charged	4,994	4,236	1,786	
Unpaid Operator & Family Labor	7,625	8,948	5,341	
- Feeder Livestock Purchased		-1,416	-372	
Total Farm Expense	52,404	40,420	24,298	
MANAGEMENT INCOME & PROFIT				
Total	-2,102	-5,180	-8,199	
As a Percent of Gross Income	-4.2%	-14.7%	-50.9%	
UNPAID OPERATOR & FAMILY LABOR				
Total	7,625	8,948	5,341	
As a Percent of Gross Income	15.2%	25.4%	33.2%	
OVERHEAD COSTS				
Total	13,175	12,017	7,904	
As a Percent of Gross Income	26.2%	34.1%	49.1%	
VARIABLE COSTS				
Total	31,604	19,454	11,053	
As a Percent of Gross Income	62.8%	55.2%	68.7%	
NET CASH INCOME	9,267	7,878	-2,256	
NET FARM INCOME	10,516	8,004	-1,071	
INVESTMENT				
Total	109,338	89,459	68,694	
Return to Investment	4,457	186	-4,078	
Percent Return on Investment	4.1%	0.2%	-5.9%	
Gross Income Per $1,000 Invested	460	394	234	
LABOR EFFICIENCY FACTOR	1.067	.670	.572	
TOTAL UNPAID LABOR & MANAGEMENT INCOME				
Total	5,522	3,768	-2,857	
Hour	2.18	.94	-1.30	

1971 Ohio Farm Business Analysis Report

Overall Swine Farm Summary

CASH RECEIPTS	Top 25%	Middle 50%	Lower 25%	My farm
General Crops	$ 973	$ 2,477	$ 333	
Special Crops		67		
Cash Rent and Royalties	196	53	52	
Labor Off Farm	240			
Custom Work	160	754	69	
Wool		140		
Tax Refund	24	157	26	
Patronage Dividend	9	136	38	
Miscellaneous Receipts	286	26	187	
Government Payments	842	458	420	
Government Crop Payments	217	660	59	
Market Livestock				
Swine	40,515	22,607	11,310	
Cattle	527	3,264	381	
Veal Calves		48	85	
Lambs		1,731		
Total Cash Receipts	$43,993	$32,584	$12,963	
CASH EXPENSES				
Hired Labor	1,922	1,514	129	
Feed Purchased	22,115	8,675	5,281	
Farm Supplies	859	840	768	
Machinery Repairs	741	1,004	447	
Bldg., Fence, Tile, Etc. Repairs	544	788	411	
Fuel, Oil, and Grease	835	1,359	673	
Electricity (Farm Share)	572	245	243	
Telephone (Farm Share)	61	58	51	
Miscellaneous Expenses	580	736	209	
Seeds and Plants	589	598	574	
Fertilizer and Lime	1,486	3,531	1,876	
Machine Hire and Trucking	340	250	227	
Auto Expense (Farm Share)	81	320	73	
Interest on Notes and Mortgage	1,566	1,130	2,335	
Veterinary and Medicine	1,420	318	263	
Breeding Fees and Registration		2	235	
Feeder Livestock Purchase		1,416	372	
Taxes	861	835	643	
Cash Rent		812	46	
Insurance	150	268	358	
Total Cash Expenses	$34,725	$24,705	$15,219	

1971 Ohio Farm Business Analysis Report

Overall Swine Farm Summary

	Top 25%	Middle 50%	Lower 25%	My farm
CAPITAL GAIN				
Raised Breeding Stock	2,104	2,005	316	
Purchased Breeding Stock	-302	-48	-169	
Machinery and Equipment	17	81	-64	
Total Capital Gain or Loss	1,820	2,038	83	
NET INVENTORY CHANGE				
Raised Breeding Livestock	2,122	-805	-491	
Market Livestock	4,732	1,628	2,508	
Grain, Hay, Supplement	-2,252	1,118	1,477	
Supplies and Fertilizer	-112	92	-69	
Total Inventory Change	4,488	2,033	3,424	
DEPRECIATION				
Buildings, Fence, Etc.	2,182	1,430	970	
Machinery and Equipment	2,819	2,274	1,353	
Purchased Breeding Stock	58	240		
Total Depreciation	5,059	3,945	2,323	
CAPITAL INVESTMENT				
Purchased Breeding Stock	4,118	1,601	805	
Raised Breeding Stock	4,799	6,531	1,932	
Market Livestock	12,619	8,731	4,115	
Grain and Hay	8,446	13,130	2,913	
Supplies and Fertilizer	365	110	59	
Machinery and Equipment	9,813	10,598	6,556	
Buildings, Fence, Tile	20,373	16,403	17,960	
Land (Current Ag. Value)	48,802	32,352	34,351	
Total Capital Investment	109,338	89,459	68,694	
RATIO ANALYSIS				
Profit Margin	.089	.005	-.253	
Turnover	.460	.394	.234	
Return on Investment	.041	.002	-.059	

1971 Ohio Farm Business Analysis Summary

Overall Swine Farm Summary

LABOR EFFICIENCY Reported Labor Used on Farm	Top 25%	Middle 50%	Lower 25%	My Farm
Operators Labor Used				
First Operator				
Hours	2,200.0	2,772.5	1,548.3	
Value/Hr	$3.00	$2.38	$2.66	
Second Operator				
Hours		528.0		
Value/Hr		$1.90		
Unpaid Family Labor Used				
Wife				
Hours	316.6	153.3	66.6	
Value/Hr	$1.87	$2.16	$2.00	
Family Labor Over 14				
Hours	83.3	658.3	741.6	
Value/Hr	$1.50	$1.66	$1.75	
Family Labor Under 14				
Hours	16.6	83.3		
Value/Hr	$1.00	$1.00		
Hired Labor				
Hours	936.6	591.3	71.0	
Value/Hr	$2.05	$2.56	$1.82	
Number of Man Equivalent Hours Used	3,465	4,582	2,266	
Number of PMWU Used	346	458	226	
Number of Man-Year Equivalents Used	1.15	1.52	.75	
Value of Operators Labor Used	$6,866	$7,430	$3,925	
Value of Unpaid Family Labor Used	$758	$1,518	$1,416	
Value of Hired Labor Used	$1,922	$1,514	$129	
Value of Total Labor	$9,547	$10,463	$5,471	
Value of Labor Per Man Hour Equivalent	2.75	2.28	2.42	
Value of Labor Per PMWU	$27.59	$22.84	$24.20	
Value of Labor Per Man-Year Equivalent	$8,266	$6,852	$7,246	

1971 Ohio Farm Business Analysis Report

Overall Swine Farm Summary

	Top 25%	Middle 50%	Lower 25%	My Farm
CROPS SUMMARY				
Crop Production*				
Corn				
Acres	85	99	64	
Yield	98.6 bu.	85.2 bu.	92 bu.	
Soybeans				
Acres	4	10		
Yield	37.0 bu.	41.0 bu.		
Oats				
Acres	2	17	8	
Yield	101.2 bu.	43.8 bu.	62 bu.	
Wheat				
Acres	3	18	3	
Yield	50.0 bu.	27.0 bu.	45 bu.	
Clover				
Acres	1	28	2	
Yield	2.0 T.	1.4 T.	1.2 T.	
General Crop Acres	100	213	87	
Total Harvested Crop Acres	129	221	88	
Value of General Crops	$10,390	$16,017	$7,484	
Value of All Crops	$10,607	$16,745	$7,543	
General Crop Prod. Value/Acre	$103.90	$75.20	$86.02	
All Crop Prod. Value/Acre	$82.22	$75.77	$85.71	
Percent of Gen. Crops in Corn and Soybeans	89.0%	51.6%	73.6%	
Percent Total Tillable Acres in Corn and Soybeans	67.9%	48.5%	71.9%	
Fertilizer and Lime Cost Per Acre	$11.34	$15.55	$21.08	
Machinery Investment Per Crop Acre	$74.91	$46.69	$73.66	
Total Power and Machinery Cost	$5,245	$5,090	$3,099	
Machinery Cost Per Crop Acre	$40.04	$22.42	$34.82	
LIVESTOCK SUMMARY				
Total Value of Feed Fed to all Livestock Enterprises	$30,570	$19,415	$9,109	
Value of Net Livestock Increase	$50,440	$31,133	$13,401	
Returns Per $ Feed Fed to all Livestock Enterprises	$1.65	$1.60	$1.47	

* A few farms produced crops such as barley, other hay or sweet corn which were not included in this list.

1971 Ohio Farm Business Analysis Report

Swine Enterprise

	Top 25%	Middle 50%	Lower 25%	My farm
NUMBER OF FARMS	6	12	7	
GENERAL INFORMATION				
Swine Performance				
Number of Sows and Gilts	55	40	34	
Number of Sows and Gilts Per Man Equivalent	105	81	80	
Number of Litters Farrowed	94	73	56	
Total Number of Pigs Weaned	735	640	310	
Number of Pigs Weaned Per Litter	7.8	8.7	5.5	
Pounds of Pork Produced	111,371	123,246	90,345	
Pounds of Pork Produced Per Man Equivalent	212,800	249,800	213,400	
Returns Per $ Feed Fed	$1.71	$1.56	$1.53	
Feeder Pigs Sold				
Number	372	99	16	
Pounds	16,727	4,026	645	
Value	$5,985	$1,258	$268	
Wt/Pig	45.0	40.5	40.3	
Value/Pig	$16.09	$12.66	$16.75	
Market Hogs Sold				
Number	374	529	360	
Pounds	83,063	114,607	77,874	
Value	$15,649	$22,123	$15,325	
Wt/Hog	221	216	215	
Value/Pound	.188	.193	.196	
PER CWT INFORMATION (The following information is on a per cwt pork produced basis)	Per cwt	Per cwt	Per cwt	
Productive Man Work Units	.14	.12	.14	
Value of Labor Used	$3.19	$3.21	$3.48	
VALUE OF PORK PRODUCTION				
Total for Farm	22.66	20.88	20.60	
Cash Expenses				
Hired Labor	.96	.34	.96	
Feed Purchased	6.36	8.47	7.34	
Farm Supplies	.36	.16	.09	
Machine Repairs	.08	.06	.16	
Build Fence, Etc.	.29	.28	.41	
Fuel, Oil & Grse.	.13	.22	.42	
Electric	.15	.24	.21	

1971 Ohio Farm Business Analysis Report

Swine Enterprise Summary (cont.)

	Top 25% Per cwt	Middle 50% Per cwt	Lower 25% Per cwt	My farm
Telephone	.03	.02	.06	
Misc. Expense	.26	.14	.08	
Machine Hired Trk.	.08	.03	.00	
Auto Expense	.05	.06	.04	
Interest on Notes	.29	.57	.39	
Vet Medicine	.34	.48	.42	
Breeding Fees			.11	
Feeder Livestock *	.23	1.32	.46	
Taxes	.22	.21	.28	
Rent	.01	.01	.36	
Insurance	.08	.15	.22	
Total Cash Expenses	9.68	11.43	11.57	
Non-Cash Expenses				
Depreciation				
Bldg. Fence Tile	$ .57	$ .78	$ .93	
Machinery & Equip.	.29	.77	.64	
Purchased Brdg. Stk.	.08	.02	.09	
Total Depreciation	.94	1.58	1.66	
Unpaid Opr. and Fam. Labor	2.23	2.88	2.52	
Interest Not Charged	.86	.96	1.66	
Home Grown Feeds	6.92	4.92	6.12	
Total Non-Cash Expenses	10.96	10.35	11.97	
TOTAL EXPENSE OF PORK PRODUCTION	20.64	21.78	23.54	
Management Income and Profit	2.02	-.90	-2.93	
Value of Production - Cash Expenses	12.97	9.44	9.03	
Total Investment	19.28	25.49	34.05	
Return on Investment	3.18	.63	-.89	
Percent Return on Investment	16.5%	2.5%	-2.6%	
Total Feed Costs	13.28	13.39	13.46	
Feed Required				
Value of Supplement	5.47	5.94	7.07	
Value of Grain	7.69	7.37	6.24	
Value of Roughages	.12	.07	.14	

* Feeder livestock purchases are not included in the cash expense total. They are deducted from value of pork production.

1971 Ohio Farm Business Analysis Report

Swine Enterprise Summary (cont.)

	Top 25%	Middle 50%	Lower 25%	My farm
Return to Unpaid Operator and Family Labor, Management and Profit				
Total per cwt	$4.25	$1.97	-$.41	_____
Per hour	$4.88	$1.89	-$.45	_____
RATIO ANALYSIS				
Profit Margin	.140	.030	-.043	_____
Turnover	1.175	.819	.605	_____
Return on Investment	.165	.025	-.026	_____

MAJOR IMPROVEMENTS

Two major improvements have been added to the farm records analysis: an expanded enterprise analysis, and a ratio analysis. The enterprise analysis examines the swine enterprise as if it was a separate business. The ratio analysis examines three key areas of a business to help determine how it compares with other businesses. These ratio analysis figures are located at the bottom of page 6 for the total farm summary and page 11 for the swine enterprise.

The enterprise analysis section, which starts on page 9 of this summary, gives an item by item breakdown of cost and income information for the swine enterprise. Data for the swine enterprise summary is taken from farms which had the cost and production information necessary to receive an analysis of the swine enterprise.

HOW TO USE THE RATIO ANALYSIS SECTION

The ratio analysis section permits a comparison of a business with larger or smaller businesses. Comparison of these ratio figures with state summary figures will quickly indicate how a farm or a particular enterprise compares with others in the state concerning "profit margin", "turnover", and "return on investment".

The "return on investment" figure, called MANAGEMENT INCOME AND PROFIT + PAID AND UNPAID INTEREST ÷ TOTAL INVESTMENT in the printout, gives a good indication of how well the investments in a business are working. If the return on investment figure for a particular business or enterprise is low, that investment is not returning as much as other similar investments in the state. A closer examination of return on investment can easily be made by looking at the "profit margin" and "turnover" ratios.

The "profit margin" ratio, referred to as MANAGEMENT INCOME AND PROFIT + PAID AND UNPAID INTEREST ÷ GROSS INCOME on the individual printout, is a measure of the profitability of a business. If the figure is low, the farm or enterprise has less profit for each dollar of product sold than other similar farms or enterprises in the state. This may indicate that expenses are high or sale price is low, or both. A look at income figures such as VALUE PER CWT OF PORK PRODUCED or RETURN PER $ FEED FED and at cost figures per cwt will provide a better idea of what is causing profit margin to be low.

The "turnover" ratio, called GROSS INCOME ÷ TOTAL INVESTMENT in the individual printout, is a measure of how well investments are being utilized. If the "turnover" ratio is low, the farm or enterprise has less sales for each dollar invested than the farms or enterprises in the state summary. Turnover can be examined more closely by looking at receipts and investments. Such items as TOTAL VALUE OF PRODUCTION PER CWT PORK PRODUCED or GENERAL CROP PRODUCTION VALUE PER ACRE will indicate how an individual farm's receipts compare with those in the state summary. Investments can be examined more closely by comparing such figures as TOTAL INVESTMENT PER CWT PORK PRODUCED or MACHINERY INVESTMENT PER CROP ACRE with state summary figures.

An example of how these ratios can be used follows.

EXAMPLE:

John Doe, a swine farm operator in west central Ohio, thinks that hog prices will improve in 1972, but would like to improve the profitability of his business as much as possible. He notes that the number of farms in the state summary is small, and will keep this in mind when making his

comparison. His farm has a Return on Investment ratio for 1971 of .028 (or a return on investment of 2.8%). He compares this return with those in the state summary, and finds that his farm is slightly below the top 25% average, but well above the middle 50% average. John decides that he wants to improve his return on investment to the farm. To see where improvements should be made, he compares the two other ratios for his farm with those in the state summary. His profit margin ratio is .090 (or profit and interest per dollar of gross farm income is 9¢), slightly above the average of farms in the upper 25%. However, his turnover ratio is .300 (or gross farm income per $1,000 invested of $300), less than the middle 50% average in the summary. John would like to improve both of these ratios, but since the turnover ratio is low, he feels it probably holds the most promise for improvement.

To see how his turnover may be improved, John looks at several factors. He finds that his return per crop acre is $86, somewhat greater than the figures in the state summary. His machinery investment per crop acre of $97.00 per acre is well above the figures in the state summary. To further examine his crop situation, he examines the crops grown and yield per acre listed in the summary. John thinks that several improvements cam be made in his crop operation such as growing less oats and clover, growing more corn, soybeans and alfalfa, improving yield per acre, and renting more crop land.

Next John looks at his livestock enterprise. He finds that his return per dollar of feed fed of $1.60 is near the middle 50% of the farms for the overall farm summary and the swine summary. He looks further and finds that his total return per cwt of pork produced of $21.00 is near the mid-

dle 50% average and that pigs weaned per litter of 7.0 is rather low in comparison to farms in the upper 25% and middle 50%. His investment per cwt pork produced is in line with the top 25% at $20.00. John thinks he can increase the number of pigs per litter to increase return per dollar of feed fed, gross income to the swine enterprise and swine enterprise profit.

John looks at several other factors and decides he can improve his farm business in several ways, including an increase in number of pigs per litter, number of sows and gilts, and number of crop acres, while keeping cost increases relatively low. This should improve his turnover as well as his profit margin, and thereby increase his return on investment.

Use of these ratios will permit fast identification of trouble spots and help to locate what is causing them. For questions concerning this analysis, contact your county agent or farm management area agent in your area.

GLOSSARY OF SELECTED TERMS*

GROSS FARM INCOME - is the sum of all cash receipts plus increases in inventory and capital gains less decreases in inventory, capital losses, and feeder livestock purchases. Feeder livestock purchases are deducted to reflect on farm production.

INTEREST NOT CHARGED - represents an estimated charge for equity capital. It is determined by taking six percent of total investment and subtracting the amount of interest paid during the year. This calculation makes a similar charge for the total investment of each farm business.

UNPAID OPERATOR & FAMILY LABOR - is the wage charge for the operator and unpaid family labor using the time worked and rates per hour estimated by the farm operator.

TOTAL FARM EXPENSE - is the sum of all cash and non-cash expense for the farm less the cost of purchased feeder livestock. Non-cash expense includes depreciation, interest not charged and unpaid operator and family labor charge.

MANAGEMENT INCOME & PROFIT - equals Gross Income minus Total Farm Expense. This represents the return to management income and profit after all cash and non-cash expenses are deducted.

FAMILY LABOR & MANAGEMENT INCOME - equals Management Income and Profit plus Unpaid Operator and Family Labor. This represents the return to the operator and his family for their unpaid labor, management and profit.

NET FARM INCOME - equals Family Labor and Management Income plus Interest Not Charged. This represents the return to the operator for equity capital, unpaid labor, management and profit.

RETURN TO INVESTMENT - equals Management Income and Profit plus paid and unpaid interest. Paid and unpaid interest equals six percent of Total Investment. This represents the return to all capital, owned and borrowed, plus management and profit. This return times 100 divided by Total Investment gives Percent Return On Investment.

OVERHEAD COSTS - is the sum of depreciation, building repairs, interest paid, property taxes, cash rent, insurance and interest not charged. These represent costs that are essentially fixed and must be recovered regardless of the level of production.

VARIABLE COSTS - is the sum of all cash expenses other than those included in Overhead Costs. These costs vary with the level of production.

NUMBER OF MAN-YEAR EQUIVALENTS - represents the number of full-time man equivalents available on the farm for the entire year. Family labor is adjusted to a man-equivalent basis. One man-year equivalent is 3,000 hours.

* A complete listing of calculations is contained in occasional paper #49, "A Guide To Interpretation of the Computer Printout".

VALUE OF ALL CROPS - represents all crop production valued at market price (not necessarily sold) plus government crop payments.

VALUE OF NET LIVESTOCK INCREASE - is the net value of livestock and livestock products produced during the year. This includes livestock sold less value of feeder livestock plus change in inventory.

RETURN PER $ FEED FED TO ALL LIVESTOCK ENTERPRISES - equals the Value of Net Livestock Increase divided by the Total Value of Feed Fed to All Livestock. The returns per dollar of feed fed should pay for the feed, labor, overhead on buildings and equipment required by livestock, other production costs, and provide a profit.

MACHINERY COST PER CROP ACRE - is the sum of fuel, oil, grease, repairs, and machine hire expenditures plus charges for depreciation and investment, less custom work receipts divided by acres of cropland.

PROFIT MARGIN RATIO - equals Management Income and Profit plus paid and unpaid interest divided by gross income. This ratio shows the dollars of profit and interest received from each dollar of gross income.

TURNOVER RATIO - equals Gross Income divided by Total Investment. This ratio is the same as Gross Income Per $1,000 Invested figure, but is given as a decimal figure rather than a return per $1,000. It gives the dollars of gross income received during the year for each dollar of investment.

RETURN ON INVESTMENT RATIO - equals Management Income and Profit plus paid and unpaid interest divided by Total Investment. This ratio is the same as Percent Return On Investment, but is stated as a decimal rather than a percentage. It gives the dollars of profit and interest received during the year for each dollar of investment.

SAMPLE POPULATION

The 12 owner-operator and tenant-landlord swine farm records summarized in this report are part of the 462 farm records of all types submitted by Ohio farmers to Ohio State University for analysis in 1971. Not all farm records were complete and accurate enough to be used in the summaries. Care must be used in interpreting the summaries, especially where only a small number of farms are included.

SUMMARY DATA

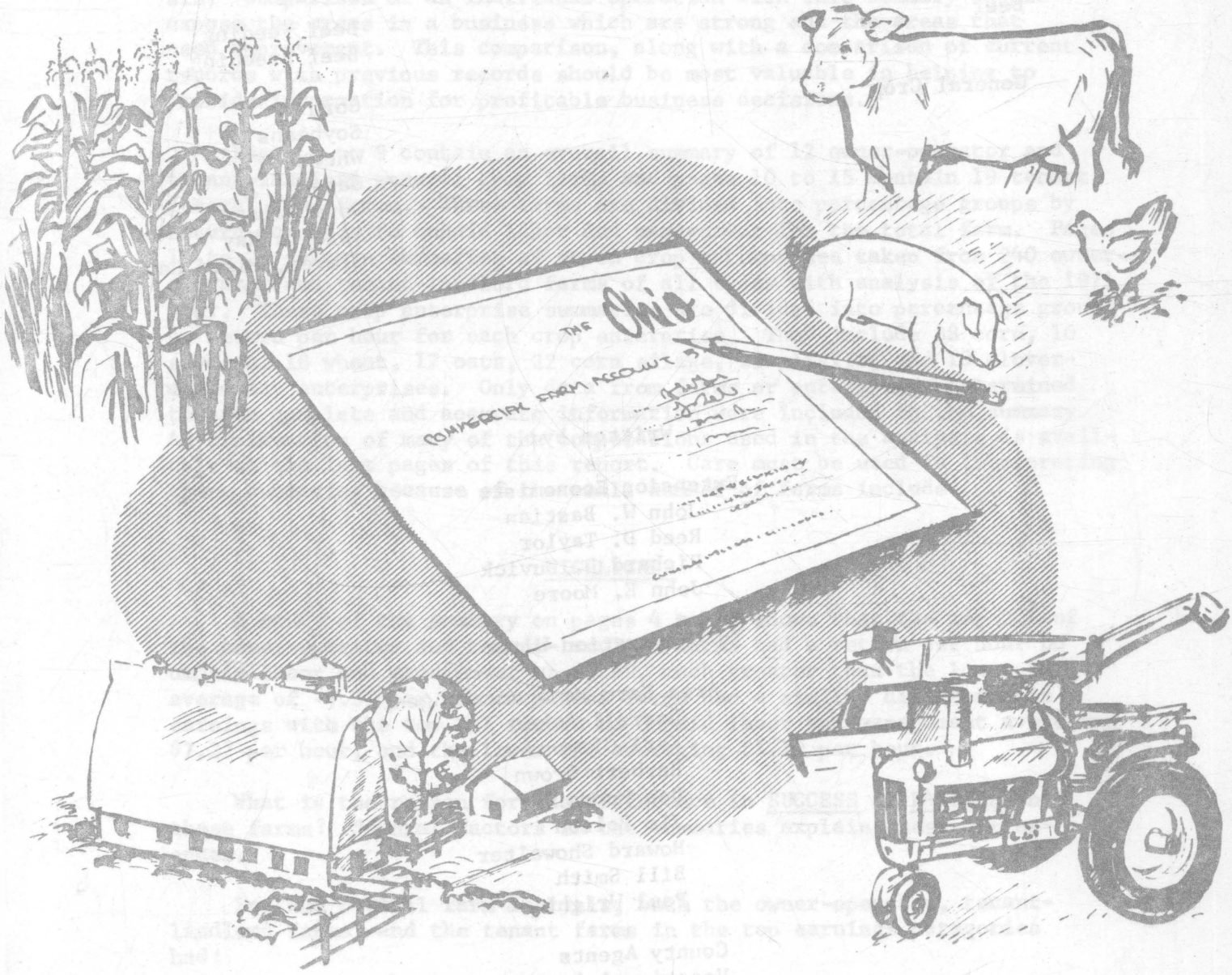
All data included in the tables are either simple averages for all farms in the group or weighted averages comparing two simple averages for that group. For example, Total Crop Acres is a simple average representing the total number of crop acres for any particular group of farms divided by the number of farms in the group. However, Machinery Cost Per Crop Acre is a weighted average calculated by dividing the average Total Machinery Cost for any particular group by the average Total Crop Acres for that group.

Extension MM No. 326
ESO No. 104

1971

Farm Business Analysis Report

General Crop Summary



Department of Agricultural Economics and Rural Sociology

COOPERATIVE EXTENSION SERVICE

THE OHIO STATE UNIVERSITY

Columbus, Ohio

SUMMARIES AVAILABLE FOR 19 1

TOTAL FARM SUMMARIES	ENTERPRISE SUMMARIES INCLUDED
Dairy	Dairy Milk
Swine	Swine
Beef	Beef Feeding Beef Breeding
General Crop	Corn Soybeans Wheat Oats Corn silage Alfalfa Hay Clover, Mixed Hay

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1971 OHIO FARM BUSINESS ANALYSIS REPORT

GENERAL CROP SUMMARY

This summary is designed to help farm businessmen improve their income. Each section is divided into three groups composed of the top 25%, middle 50%, and lower 25% of the farms sorted by return per hour to unpaid labor and management. The report is arranged in a format similar to the computer printout received in the individual farm analysis. Comparison of an individual operation with this summary should expose the areas in a business which are strong and the areas that need improvement. This comparison, along with a comparison of current records with previous records should be most valuable in helping to provide information for profitable business decisions.

Pages 4 to 9 contain an overall summary of 12 owner-operator and tenant-landlord general crop farms and pages 10 to 15 contain 19 tenant general crop farms. These farms are divided into percentage groups by return per hour to unpaid labor and management for the total farm. Pages 16 to 29 contain summaries of seven crop enterprises taken from 240 owner-operator and tenant-landlord farms of all types with analysis of the 1971 year. These crop enterprise summaries are divided into percentage groups by return per hour for each crop enterprise. They include 38 corn, 10 soybean, 18 wheat, 17 oats, 22 corn silage, 15 alfalfa, and 10 clover-mixed hay enterprises. Only data from farms or enterprises determined to have complete and accurate information were included in the summary. An explanation of many of the computations used in the analysis is available on the last pages of this report. Care must be used in interpreting these summaries because of the small number of farms included.

HIGHLIGHTS

A study of the summary on pages 4 to 15 shows that the top 25% of the owner-operator and tenant-landlord farms had a return per hour to unpaid labor and management of $9.69, much greater than the lower 25% average of -$.31 per hour. Tenant farms had a similar difference in earnings with the top 25% return to unpaid labor and management averaging $7.37 per hour, and the lower 25% averaging $1.10 per hour.

What is the reason for the difference in SUCCESS or FAILURE on these farms? Several factors in the summaries explain these differences.

For the overall farm analysis, both the owner-operator, tenant-landlord farms, and the tenant farms in the top earnings categories had:

1. Lower overhead costs as a percent of gross income.

2. Lower machine investment per crop acre.

3. Greater gross farm income per farm (and when computed, greater gross farm income per man).

4. Greater return per dollar of feed fed.

5. Greater livestock income. (The top 25% and middle 50% averages for the owner-operator, tenant-landlord farm summary are similar.)

6. More crop acres.

7. More hired labor.

8. Greater gross income per $1,000 invested. (Greater turnover)

9. Greater profit margin. (Management Income and Profit plus paid and unpaid interest ÷ Gross Income)

10. Greater percent return on investment. (Management Income and Profit plus paid and unpaid interest ÷ Total Investment)

The crop enterprises did not have as many clear-cut characteristics that separate top earnings per hour from low earnings per hour. However, several important points can be found. The oats enterprise lost money, even for the top 25% category. In nearly all cases, the top 25% in each of the crop enterprises had:

1. Relatively high yields while keeping costs in line.

2. Lower cost per bushel or per ton.

3. Greater number of acres of that particular enterprise.

4. Greater profit margin. (Management Income and Profit plus paid and unpaid interest ÷ Gross Income)

5. Greater turnover. (Gross Income per $1,000 invested)

6. Greater percent return on investment. (Management Income and Profit plus paid and unpaid interest ÷ Total Investment)

SUCCESS or FAILURE depends on whether the business:

1. IS MAKING A PROFIT on each dollar of output.

Is the cropping program geared to produce maximum net return per crop acre?

Does the livestock operation produce maximum return per dollar of feed fed?

Are non-cash expenses per crop acre low enough to permit a profit?

2. HAS ENOUGH VOLUME.

Is there enough volume to provide a satisfactory income potential?

Is the business volume large enough to carry the investment and overhead cost in equipment, facilities and other capital resources?

Is the business large enough to provide productive and profitable employment for labor resources?

The high income operators out-performed their competition in both making a profit with each dollar of sales, and having enough volume for the amount of investment and labor available. They managed larger businesses, accomplished more per worker, and used capital resources more effectively. They excelled in the performance of their livestock enterprises and their crop enterprises.

No <u>one</u> factor can be singled out as the basic difference between high and low income farms. For each of the efficiency measures studied, some farms in the low income group ranked near the top. SATISFACTORY INCOMES were the result of <u>above</u> average performance "ACROSS THE BOARD", rather than outstanding achievement in only one or two departments.

1971 OHIO FARM BUSINESS ANALYSIS REPORT

OVERALL GENERAL CROP FARM SUMMARY

12 OWNER-OPERATOR & TENANT-LANDLORD GENERAL CROP FARMS

	Rank by Family Labor & Management Income/Hour to Farm			
	Top 25%	Middle 50%	Lower 25%	My Farm
Number of Farms	3	6	3	
INCOME				
Cash Receipts	$137,364	$ 46,878	$ 27,253	
Capital Gains and Losses	888	940	27	
Inventory Changes	-400	-448	2,632	
Feeder Livestock	-3,383	-462	-261	
Gross Farm Income	134,468	46,907	29,651	
EXPENSES				
Cash Expenses	78,652	30,459	20,012	
Depreciation	9,964	4,510	5,102	
Interest Not Charged	11,606	6,075	5,688	
Unpaid Operator & Family Labor	15,666	9,173	6,320	
- Feeder Livestock	-3,383	-462	-261	
Total Farm Expense	112,505	49,757	36,863	
MANAGEMENT INCOME & PROFIT				
Total	21,962	-2,849	-7,211	
As a Percent of Gross Income	16.3%	-6.1%	-24.3%	
UNPAID OPERATOR & FAMILY LABOR				
Total	15,666	9,173	6,320	
As a Percent of Gross Income	11.7%	19.6%	21.3%	
OVERHEAD COSTS				
Total	45,190	21,164	17,954	
As a Percent of Gross Income	33.6%	45.1%	60.6%	
VARIABLE COSTS				
Total	51,649	19,419	12,588	
As a Percent of Gross Income	38.4%	41.4%	42.5%	
NET CASH INCOME	58,711	16,418	7,240	
NET FARM INCOME	49,235	12,399	4,797	
INVESTMENT				
Total	$331,588	$155,754	$154,135	
Return to Investment	41,857	6,495	2,036	
Percent Return on Investment	12.6%	4.2%	1.3%	
Gross Income Per $1,000 Invested	405	301	192	
LABOR EFFICIENCY FACTOR	.674	.746	.458	
TOTAL UNPAID LABOR & MANAGEMENT INCOME				
Total	37,629	6,323	-890	
Hour	9.69	1.69	-.31	

1971 Ohio Farm Business Analysis Report

Overall Owner-Operator and Tenant-Landlord General Crop Farm Summary

	Top 25%	Middle 50%	Lower 25%	My Farm
CASH RECEIPTS				
Milk and Cream	$ 5,738	$	$ 385	
General Crops	107,293	28,599	17,151	
Special Crops		494	208	
Cash Rent and Royalties	1,577	195	167	
Labor Off Farm	776		410	
Custom Work	890	946	2,552	
Other Livestock Products	56	967		
Tax Refund	215	34	103	
Patronage Dividend	413	21		
Miscellaneous Receipts	240	589	298	
Government Payments	318	541		
Government Crop Payments	10,447	1,874	1,205	
Market Livestock				
Swine		11,574	3,473	
Cattle	5,293	1,002	1,128	
Veal Calves	162		169	
Lambs	3,942	33		
Total Cash Receipts	137,364	46,878	27,253	
CASH EXPENSES				
Hired Labor	7,216	1,104	966	
Feed Purchased	2,420	4,843	2,120	
Farm Supplies	4,166	958	1,184	
Machinery Repairs	6,549	2,214	1,317	
Bldg., Fence, Tile, Etc. Repairs	955	173	221	
Fuel, Oil, and Grease	4,870	1,742	1,070	
Electricity (Farm Share)	509	334	325	
Telephone (Farm Share)	302	84	59	
Miscellaneous Expenses	1,041	206	278	
Seeds and Plants	6,324	1,413	1,249	
Fertilizer and Lime	14,162	5,248	3,375	
Machine Hire and Trucking	3,251	916	227	
Auto Expense (Farm Share)	550	113	349	
Interest on Notes and Mortgage	8,288	3,269	3,559	
Veterinary and Medicine	223	233	52	
Breeding Fees and Registration	61	5	13	
Feeder Livestock Purchase	3,383	462	261	
Taxes	3,220	1,053	1,159	
Cash Rent	10,177	5,633	2,038	
Insurance	978	448	186	
Total Cash Expenses	78,652	30,459	20,012	

1971 Ohio Farm Business Analysis Report

Overall Owner-Operator and Tenant-Landlord General Crop Farm Summary

	Top 25%	Middle 50%	Lower 25%	My Farm
CAPITAL GAIN				
Raised Breeding Stock	$ 504	$ 913	$ 60	
Purchased Breeding Stock	293	-66		
Machinery and Equipment	90	92	-33	
Total Capital Gain or Loss	888	940	27	
NET INVENTORY CHANGE				
Raised Breeding Livestock	1,240	512	66	
Market Livestock		160	-134	
Grain, Hay, Supplement	-2,410	-1,107	2,687	
Supplies and Fertilizer	769	-14	12	
Total Inventory Change	-400	-448	2,632	
DEPRECIATION				
Buildings, Fence, Etc.	1,198	1,067	1,403	
Machinery and Equipment	8,558	3,377	3,699	
Purchased Breeding Stock	206	66		
Total Depreciation	9,964	4,510	5,102	
CAPITAL INVESTMENT				
Purchased Breeding Stock	8,251	1,975		
Raised Breeding Stock	8,263	2,209	516	
Market Livestock		4,859	1,487	
Grain and Hay	38,647	16,380	13,601	
Supplies and Fertilizer	1,583	143	242	
Machinery and Equipment	57,110	29,471	17,700	
Buildings, Fence, Tile	14,574	22,966	15,775	
Land (Current Ag. Value)	203,158	77,750	104,812	
Total Capital Investment	331,588	155,754	154,135	
RATIO ANALYSIS				
Profit Margin	.311	.138	.069	
Turnover	.405	.301	.192	
Return on Investment	.126	.042	.013	

1971 Ohio Farm Business Analysis Report

Overall Owner-Operator and Tenant-Landlord General Crop Farm Summary

	Top 25%	Middle 50%	Lower 25%	My Farm
LABOR EFFICIENCY				
Reported Labor Used On Farm				
Operators Labor Used				
Hours	3,000.0	2,515.0	2,500.0	
Value/Hr	$3.83	$2.33	$2.16	
Hours	800.0	600.0		
Value/Hr	$5.00	$1.75		
Unpaid Family Used				
Wife				
Hours		608.3	216.6	
Value/Hr		$1.75	$1.75	
Family Labor Over 14				
Hours		150.0	283.3	
Value/Hr		$2.50	$1.25	
Family Labor Under 14				
Hours	166.6	33.3		
Value/Hr	$1.00	$1.50		
Hired Labor				
Hours	3,350.0	643.5	466.6	
Value/Hr	$2.15	$1.72	$2.07	
Number of Man Equivalent Hours Used	7,233	4,381	3,366	
Number of PMWU Used	723	438	336	
Number of Man-Year Equivalents Used	2.41	1.46	1.12	
Value of Operators Labor Used	$15,500	$ 7,331	$5,500	
Value of Unpaid Family Labor Used	166	1,841	820	
Value of Hired Labor Used	7,216	1,104	966	
Value of Total Labor	22,883	10,278	7,287	
Value of Labor Per Man Hour Equivalent	3.16	2.34	2.16	
Value of Labor Per PMWU	$31.64	$23.46	$21.65	
Value of Labor Per Man-Year Equivalent	$9,492	$7,038	$6,495	

1971 Ohio Farm Business Analysis eport

Overall Owner-Operator and Tenant-Landlord Gene al Crop Farm Summary

	Top 25%	Midd e 50%	Lower 25%	My Farm
CROPS SUMMARY				
Crop Production				
Corn				
Acres	412	158	86	
Yields	122.50	83.10	108.80	
Soybeans				
Acres	318	108	74	
Yields	31.90	30.10	32.70	
Oats				
Acres	57	24	19	
Yields	60.10	52.10	76.50	
Wheat				
Acres	104	33	8	
Yields	41.20	50.70	50.80	
Alfalfa				
Acres	6		1	
Yields	5.40		1.50	
Clover				
Acres	6	11	16	
Yields	4.00	2.50	2.40	
General Crop Acres	926	366	252	
Total Harvested Crop Acres	1,061	434	268	
Value of General Crops	$ 98,635	$32,686	$22,261	
Value of All Crops	109,083	35,758	23,466	
General Crop Prod. Value/Acre	$106.51	$89.30	$88.33	
All Crop Prod. Value/Acre	102.81	82.39	87.55	
Percent of Gen. Crops in Corn and Soybeans	80.2%	72.7%	63.5%	
Percent Total Tillable Acres in Corn and Soybeans	68.5%	60.5%	59.7%	
Fertilizer and Lime Cost Per Acre	$ 13.06	$11.93	$12.59	
Machinery Investment Per Crop Acre	52.68	66.98	66.04	
Total Power and Machinery Cost	26,315	9,184	5,172	
Machinery Cost Per Crop Acre	24.28	20.88	19.30	

1971 Ohio Farm Business Analysis Report

Overall Owner-Operator and Tenant-Landlord General Crop FArm Summary

	Top 25%	Middle 50%	Lower 25%	My Farm
LIVESTOCK SUMMARY				
Total Value of Feed Fed to all Livestock Enterprises	$6,005	$7,541	$3,152	_____
Value of Net Livestock Increase	$13,451	$13,026	$4,672	_____
Returns Per $ Feed Fed to all Livestock Enterprises	$2.24	$1.73	$1.48	_____

1971 OHIO FARM BUSINESS ANALYSIS REPORT

OVERALL GENERAL CROP FARM SUMMARY

19 TENANT GENERAL CROP FARMS

	Rank by Family Labor & Management Income per Hour to Farm			
	Top 25%	Middle 50%	Lower 25%	My Farm
Number of Farms	4	9	6	
INCOME				
Cash Receipts	$37,154	$24,131	$19,955	
Capital Gains	200	120	55	
Inventory Changes	9,512	5,794	-216	
- Feeder Livestock	-557	-502	-1,123	
Gross Farm Income	46,309	29,544	18,670	
EXPENSES				
Cash Expenses	20,156	13,599	12,706	
Depreciation	5,000	3,665	3,114	
Interest Not Charged	1,135	1,505	867	
Unpaid Operator and Family Labor	7,063	6,520	6,790	
- Feeder Livestock	-557	-502	-1,123	
Total Farm Expense	32,798	24,788	22,354	
MANAGEMENT INCOME & PROFIT				
Total	13,510	4,756	-3,683	
As a Percent of Gross Income	29.2%	16.1%	-19.7%	
UNPAID OPERATOR & FAMILY LABOR				
Total	7,063	6,520	6,790	
As a Percent of Gross Income	15.3%	22.1%	36.4%	
OVERHEAD COSTS				
Total	8,879	7,432	6,035	
As a Percent of Gross Income	19.2%	25.2%	32.3%	
VARIABLE COSTS				
Total	16,855	10,836	9,529	
As a Percent of Gross Income	36.4%	36.7%	51.0%	
NET CASH INCOME	16,997	10,532	7,248	
NET FARM INCOME	21,709	12,781	3,973	
INVESTMENT				
Total	46,132	31,630	24,496	
Return to Investment	16,278	6,653	-2,214	
Percent Return on Investment	35.3%	21.0%	-9.0%	
Gross Income Per $1,000 Invested	1,004	934	762	
LABOR EFFICIENCY FACTOR	1.062	.766	.658	
TOTAL UNPAID LABOR & MANAGEMENT INCOME				
Total	20,574	11,276	3,106	
Hour	7.37	4.45	1.10	

1971 Ohio Farm Business Analysis Report

Overall Tenant General Crop Farm Summary

	Top 25%	Middle 50%	Lower 25%	My Farm
CASH RECEIPTS				
Milk and Cream			$ 565	
General Crops	$24,254	$17,629	12,125	
Special Crops	1,741		632	
Labor Off Farm	475	28	8	
Custom Work	4,225	1,283	1,391	
Wool	1	175	29	
Tax Refund	132	96	50	
Patronage Dividend	19	11	42	
Miscellaneous Receipts	87	405	242	
Government Payments	74	234	24	
Government Crop Payments	1,690	1,566	1,188	
Market Livestock				
Swine	4,441	880	1,496	
Cattle		871	1,592	
Lambs	10	948	569	
Total Cash Receipts	37,154	24,131	19,955	
CASH EXPENSES				
Hired Labor	1,129	190	643	
Feed Purchased	1,231	908	919	
Farm Supplies	1,111	928	967	
Machinery Repairs	2,186	1,401	1,464	
Bldg., Fence, Tile, Etc. Repairs	48		10	
Fuel, Oil, and Grease	2,097	1,321	943	
Electricity (Farm Share)	152	146	96	
Telephone (Farm Share)	43	63	73	
Miscellaneous Expenses	282	200	250	
Seeds and Plants	1,431	1,371	1,120	
Fertilizer and Lime	4,146	3,426	2,829	
Machine Hire and Trucking	2,668	719	53	
Auto Expense (Farm Share)	194	125	66	
Interest on Notes and Mortgage	1,632	392	602	
Veterinary and Medicine	180	31	101	
Feeder Livestock Purchase	557	502	1,123	
Taxes	331	208	437	
Cash Rent		1,364	725	
Insurance	732	295	278	
Total Cash Expenses	20,156	13,599	12,706	

1971 Ohio Farm Business Analysis Report

Overall Tenant General Crop Farm Summary

	Top 25%	Middle 50%	Lower 25%	My Farm
CAPITAL GAIN				
Raised Breeding Stock	$ 207	$ 119	$ 64	
Purchased Breeding Stock	-7	-10	-17	
Machinery and Equipment		12	8	
Total Capital Gain or Loss	200	120	55	
NET INVENTORY CHANGE				
Raised Breeding Livestock	573	22	103	
Market Livestock	948	482	-589	
Grain, Hay, Supplement	8,180	5,195	399	
Supplies and Fertilizer	-190	94	-129	
Total Inventory Change	9,512	5,794	-216	
DEPRECIATION				
Buildings, Fence, Etc.		19	28	
Machinery and Equipment	5,000	3,646	3,066	
Purchased Breeding Stock			20	
Total Depreciation	5,000	3,665	3,114	
CAPITAL INVESTMENT				
Purchased Breeding Stock	37	1,033	775	
Raised Breeding Stock	658	655	280	
Market Livestock	1,421	841	1,741	
Grain and Hay	20,359	9,002	5,601	
Supplies and Fertilizer	721	69	198	
Machinery and Equipment	22,746	19,408	14,793	
Buildings, Fence, Tile		620	940	
Land (Current Ag. Value)	187		166	
Total Capital Investment	46,132	31,630	24,496	
RATIO ANALYSIS				
Profit Margin	.352	.225	-.119	
Turnover	1.004	.934	.762	
Return on Investment	.353	.210	-.090	

1971 Ohio Farm Business Analysis Report

Overall Tenant General Crop Farm Summary

	Top 25%	Middle 50%	Lower 25%	My Farm
LABOR EFFICIENCY				
Reported Labor Used on Farm				
Operators Labor Used				
Hours	2,487.5	2,370.1	2,452.6	
Value/Hr	$2.37	$2.61	$2.41	
Hours	225.0		226.3	
Value/Hr	$3.00		$2.00	
Unpaid Family Labor Used				
Wife				
Hours	29.0	199.5	112.6	
Value/Hr	$1.50	$1.75	$1.83	
Family Labor Over 14				
Hours			66.6	
Value/Hr			$2.00	
Family Labor Under 14				
Hours	110.0	8.8		
Value/Hr	$2.00	$2.00		
Hired Labor				
Hours	604.7	85.2	392.1	
Value/Hr	$1.87	$2.23	$1.64	
Number of Man Equivalent Hours Used	3,395	2,619	3,214	
Number of PMWU Used	339	261	321	
Number of Man-Year Equivalents Used	1.13	.87	1.07	
Value of Operators Labor Used	$6,800	$6,188	$6,449	
Value of Unpaid Family Labor Used	263	332	340	
Value of Hired Labor Used	1,129	190	643	
Value of Total Labor	8,193	6,710	7,433	
Value of Labor Per Man Hour Equivalent	2.42	2.57	2.32	
Value of Labor Per PMWU	$24.16	$25.70	$23.15	
Value of Labor Per Man-Year Equivalent	$7,244	$7,686	$6,940	

1971 Ohio Farm Business Analysis Report

Overall Tenant General Crop Farm Summary

CROPS SUMMARY Crop Production	Top 25% (*Yields, returns, and costs are for tenant's share only)	Middle 50%	Lower 25%	My Farm
Corn				
Acres	294	164	140	
Yield*	62.4	69.0	48.5	
Soybeans				
Acres	150	122	99	
Yield*	21.3	23.1	15.8	
Oats				
Acres	24	15	18	
Yield*	49.0	51.5	42.4	
Wheat				
Acres	54	32	23	
Yield*	24.3	39.8	22.2	
Alfalfa				
Acres		1	6	
Yield*		3.0	1.6	
Clover				
Acres	25	9	17	
Yield*	1.4	1.7	.9	
Corn Silage				
Acres	7		3	
Yield*	21.6		3.0	
General Crop Acres	557	349	310	
Total Harvested Crop Acres	613	381	331	
Value of General Crops*	$34,123	$24,221	$14,294	
Value of All Crops*	39,341	25,788	16,152	
General Crop Prod. Value/Acre*	$ 61.26	$ 69.40	$ 46.10	
All Crop Prod. Value/Acre*	64.17	67.86	48.80	
Percent of Gen. Crops in Corn and Soybeans	81.0%	81.9%	78.1%	
Percent Total Tillable Acres in Corn and Soybeans	73.6%	75.1%	73.1%	
Fertilizer and Lime Cost Per Acre*	$ 6.76	$ 8.99	$ 8.55	
Machinery Investment Per Crop Acre*	37.11	50.94	44.69	
Total Power and Machinery Cost*	9,285	7,094	5,089	
Machinery Cost Per Crop Acre*	15.15	18.62	15.37	

1971 Ohio Farm Business Analysis Report

Overall Tenant General Crop Farm Summary

	Top 25%	Middle 50	Lower 25%	My Farm
LIVESTOCK SUMMARY				
Total Value of Feed Fed to all Livestock Enterprises	$3,162	$1,707	$1,853	_____
Value of Net Livestock Increase	8,685	3,106	2,666	_____
Returns Per $ Feed Fed to all Livestock Enterprises	$2.75	$1.82	$1.44	_____

1971 Ohio Farm Business Analysis Report

38 Corn Enterprises

	Top 25%	Middle 50%	Lower 25%	My farm
NUMBER OF FARMS	9	19	10	
GENERAL INFORMATION				
Number of Acres	168	109	55	
Value per bushel produced	$1.10	$1.10	$1.10	
Cost per bushel produced	$.98	$1.19	$1.54	
PER ACRE INFORMATION				
(The following information is on a per acre basis)	per acre	per acre	per acre	
Bushels Produced	116.8	88.4	91.1	
Productive Man Work Units	.50	.66	.73	
Value of Labor Used	$11.98	$15.00	$13.84	
TOTAL VALUE OF PRODUCTION	$128.51	$97.26	$100.22	
Cash Expenses				
Hired Labor	$ 6.13	$ 1.94	$ 2.62	
Farm Supplies	8.23	3.22	3.22	
Machine Repairs	3.48	5.35	8.49	
Build, Fence, Etc.	.48	.23	1.84	
Fuel, Oil & Grease	5.79	4.23	4.44	
Electric	.46	.14	.15	
Telephone	.23	.10	.09	
Misc. Expense	1.22	1.22	.71	
Seeds & Plants	6.18	5.73	8.49	
Fertilizer & Lime	20.58	21.59	34.70	
Machine Hire and Trk.	1.02	1.94	6.80	
Auto Expense	.26	.39	1.02	
Interest on Notes	4.64	4.89	6.69	
Taxes	4.86	3.82	3.84	
Rent	2.71	7.76	6.87	
Insurance	1.52	.28	1.07	
Total Cash Expenses	$67.79	$62.81	$91.04	

1971 Ohio Farm Business Analysis Report

Corn Enterprise Summary (cont.)

	Top 25%	Middle 50%	Lower 25%	My farm
Non-Cash Expenses				
Depreciation				
Bldg., Fence & Tile	$ 2.39	$ 1.24	$ 1.15	
Machinery & Equip.	11.73	9.62	11.91	
Total Depreciation	14.12	10.86	13.05	
Unpaid Opr. and Fam. Labor	5.85	13.06	11.22	
Interest Not Charged	27.04	18.33	24.65	
Total Non-Cash Expenses	47.01	42.25	48.92	
TOTAL EXPENSES OF PRODUCTION	114.80	105.07	139.96	
Management Income and Profit	13.71	-7.82	-39.73	
Value of Production less Cash Expenses	60.72	34.45	9.18	
Total Investment	527.98	387.08	522.55	
Return on Investment	45.39	15.40	-8.38	
Percent Return on Investment	8.59%	3.98%	-1.60%	
Return to Unpaid Operator and Family Labor, Management and Profit				
Total Per Acre	19.56	5.25	-28.51	
Per Hour	$8.74	$.93	-$5.46	
RATIO ANALYSIS				
Profit Margin	.353	.158	-.084	
Turnover	.243	.251	.192	
Return on Investment	.086	.040	-.016	

1971 Ohio Farm Business Analysis Report

10 Soybean Enterprises

	Top 25%	Middle 50%	Lower 25%	My Farm
NUMBER OF FARMS	3	5	2	
GENERAL INFORMATION				
Number of Acres	146	75	41	
Value per bushel produced	$3.06	$2.98	$3.00	
Cost per bushel produced	2.37	3.03	4.60	
PER ACRE INFORMATION				
(The following information is on a per acre basis)	per acre	per acre	per acre	
Bushels produced	36.1	26.0	34.5	
Productive Man Work Units	.34	.48	.49	
Value of Labor Used	$8.66	$10.72	$12.66	
TOTAL VALUE OF PRODUCTION	$110.44	$77.39	$103.54	
Cash Expenses				
Hired Labor	$ 3.53	$ 2.16	$ 2.07	
Farm Supplies	7.49	1.73	5.37	
Machine Repairs	2.93	3.81	9.44	
Build, Fence, Etc.	.09	.01	.42	
Fuel, Oil & Grease	4.18	3.23	10.24	
Electric	.11	.25	.73	
Telephone	.26	.17	.49	
Misc. Expense	.83	.33	.37	
Seeds and Plants	4.73	3.49	2.59	
Fertilizer and Lime	5.71	5.35	4.07	
Machine Hire and Trk.	.66	1.01	.02	
Auto Expense	.09	.41	.83	
Interest on Notes	1.71	11.68	10.95	
Taxes	4.45	3.09	8.76	
Rent		3.45		
Insurance	1.84	.61	1.88	
Total Cash Expenses	$38.60	$40.81	$58.22	

1971 Ohio Farm Business Analysis Report

Soybean Enterprise Summary (cont.)

	Top 25%	Middle 50%	Lower 25%	My Farm
Non-Cash Expenses				
Depreciation				
Bldg., Fence, & Tile	$ 1.26	$ 1.19	$ 9.10	
Machinery & Equip.	7.72	11.64	36.82	
Total Depreciation	8.98	12.83	45.92	
Unpaid Opr. and Fam. Labor	5.13	8.56	10.59	
Interest Not Charged	32.76	16.69	43.90	
Total Non-Cash Expenses	46.87	38.08	100.41	
TOTAL EXPENSES OF PRODUCTION	85.47	78.89	158.63	
Management Income and Profit	24.97	-1.51	-55.10	
Value of Production less Cash Expenses	71.84	36.57	45.32	
Total Investment	574.60	472.99	914.49	
Return on Investment	59.44	26.85	-.24	
Percent Return on Investment	10.3%	5.7%	.03%	
Return to Unpaid Operator and Family Labor, Management and Profit				
Total Per Acre	30.10	7.04	-44.51	
Per Hour	15.34	1.89	-11.47	
RATIO ANALYSIS				
Profit Margin	.538	.347	-.002	
Turnover	.192	.164	.113	
Return on Investment	.103	.057	-.0003	

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18 Wheat Enterprises

	Top 25%	Middle 50%	Lower 25%	My Farm
NUMBER OF FARMS	4	9	5	
GENERAL INFORMATION				
Number of Acres	34	34	19	
Value per bushel produced*	$1.32	$1.31	$1.26	
Cost per bushel produced	1.34	1.80	2.70	
PER ACRE INFORMATION				
(The following information is on a per acre basis)	per acre	per acre	per acre	
Bushels produced	43.8	47.3	43.5	
Productive Man Work Units	.47	.56	.47	
Value of Labor Used	10.47	11.24	11.58	
TOTAL VALUE OF PRODUCTION	57.85	61.98	54.79	
Cash Expenses				
Hired Labor	$ .44	$ 3.59	$ 5.21	
Farm Supplies	.35	.47	.21	
Machine Repairs	3.21	2.47	7.21	
Fuel, Oil & Grease	2.59	2.82	6.32	
Electric	.12	.44	.16	
Telephone	.15	.12	.58	
Misc. Expense	.12	.61	1.21	
Seeds and Plants	1.88	4.50	8.53	
Fertilizer and Lime	11.35	12.79	21.32	
Machine Hire and Trk.	1.24	2.68	2.05	
Auto Expense	.21	.47	1.05	
Interest on Notes	2.35	4.85	1.00	
Taxes	1.71	4.74	4.26	
Rent		3.97	.47	
Insurance	.32	.85	1.00	
Total Cash Expenses	$26.03	$45.38	$60.58	

* No income from government payments included.

1971 Ohio Farm Business Analysis Report

Wheat Enterprise Summary (cont.)

	Top 25%	Middle 50%	Lower 25%	My Farm
Non-Cash Expenses				
Depreciation				
Bldg., Fence, & Tile	$ .56	$ 3.50	$ 1.26	
Machinery & Equip.	7.32	6.50	10.42	
Total Depreciation	7.88	10.00	11.68	
Unpaid Opr. and Fam. Labor	10.03	7.65	6.37	
Interest Not Charged	14.54	21.95	39.00	
Total Non-Cash Expenses	32.46	39.61	57.05	
TOTAL EXPENSES OF PRODUCTION	58.50	85.00	117.63	
Management Income and Profit	-.65	-23.03	-62.84	
Value of Production less Cash Expenses	31.82	16.59	-5.79	
Total Investment	281.85	446.97	666.84	
Return on Investment	16.24	3.76	-22.84	
Percent Return on Investment	5.76%	.84%	-3.4%	
Return to Unpaid Operator and Family Labor, Management and Profit				
Total Per Acre	9.38	-15.38	-56.47	
Per Hour	2.09	-5.32	-20.74	
RATIO ANALYSIS				
Profit Margin	.281	.061	-.417	
Turnover	.205	.139	.082	
Return on Investment	.058	.008	-.034	

1971 Ohio Farm Business Analysis Report

17 Oats Enterprises

	Top 25%	Middle 50%	Lower 25%	My Farm
NUMBER OF FARMS	4	8	5	
GENERAL INFORMATION				
Number of Acres	42	20	16	
Value per bushel produced	$.70	$ .66	$ .76	
Cost per bushel produced	.96	1.08	1.38	
PER ACRE INFORMATION				
(The following information if on a per acre basis)	per acre	per acre	per acre	
Bushels produced	57.2	69.4	83.8	
Productive Man Work Units	.36	.30	.31	
Value of Labor Used	$6.00	$6.45	$8.44	
TOTAL VALUE OF PRODUCTION	40.07	45.80	63.69	
Cash Expenses				
Hired Labor	$	$ .40	$ 4.44	
Farm Supplies	.31	.40	1.81	
Machine Repairs	3.26	6.25	4.88	
Build, Fence, Etc.		.20	.19	
Fuel, Oil & Grease	3.40	4.25	3.38	
Electric	.12	.15	.56	
Telephone	.29	.05	.19	
Misc. Expense	.07	.70	1.25	
Seeds and Plants	2.31	1.55	4.63	
Fertilizer and Lime	8.71	9.30	9.94	
Machine Hire and Trk.	4.14	4.25	2.81	
Auto Expense	.64	.35	1.31	
Interest on Notes	3.45	5.60	17.75	
Taxes	.98	2.80	6.25	
Rent	2.02		7.13	
Insurance	.31	.45	1.50	
Total Cash Expenses	$30.02	$36.71	$68.00	

1971 Ohio Farm Business Analysis Report

Oats Enterprise Summary (cont.)

	Top 25%	Middle 50%	Lower 25%	My Farm
Non-Cash Expenses				
Depreciation				
Bldg., Fence & Tile	$ .79	$ .55	$ 2.50	
Machinery & Equip.	7.21	16.21	7.63	
Total Depreciation	8.00	16.76	10.13	
Unpaid Opr. and Fam. Labor	6.00	6.06	4.00	
Interest Not Charged	10.74	15.36	33.81	
Total Non-Cash Expenses	24.74	38.18	47.94	
TOTAL EXPENSES OF PRODUCTION	54.76	74.86	115.94	
Management Income and Profit	-14.69	-29.06	-52.25	
Value of Production less Cash Expenses	10.05	9.10	-4.31	
Total Investment	236.67	349.40	860.38	
Return on Investment	-.50	-8.10	-.69	
Percent Return on Investment	-.21%	-2.31%	-.08%	
Return to Unpaid Operator and Family Labor, Management and Profit				
Total Per Acre	-8.69	-22.99	-48.25	
Per Hour	-2.40	-7.80	-62.13	

RATIO ANALYSIS

Profit Margin	-.012	-.177	-.010	
Turnover	.169	.131	.074	
Return on Investment	-.002	-.023	-.001	

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22 Corn Silage Enterprises

	Top 25%	Middle 50%	Lower 25%	My Farm
NUMBER OF FARMS	5	11	6	
GENERAL INFORMATION				
Number of Acres	63	38	33	
Value per ton produced	$11.60	$9.36	$ 8.00	
Cost per ton produced	5.93	7.29	10.99	
PER ACRE INFORMATION				
(The following information is on a per acre basis)	per acre	per acre	per acre	
Tons produced	18.9	16.4	14.8	
Productive Man Work Units	.94	.97	.88	
Value of Labor Used	$18.78	$18.84	$20.30	
TOTAL VALUE OF PRODUCTION	$219.59	$153.95	$118.33	
Cash Expenses				
Hired Labor	$ 4.02	$ 2.08	$ 6.76	
Farm Supplies	3.24	4.03	5.88	
Machine Repairs	6.32	8.95	7.48	
Build, Fence, Etc.	.44	.18	1.30	
Fuel, Oil & Grease	7.25	4.03	4.48	
Electric	.08	.03	.03	
Telephone	.08	.18	.15	
Misc. Expense	.71	.29	1.55	
Seeds and Plants	6.17	5.61	6.67	
Fertilizer and Lime	21.35	23.89	41.70	
Machine Hire and Trk.	.16	8.68	5.61	
Auto Expense	.32	.50	1.00	
Interest on Notes	2.30	2.92	17.30	
Taxes	4.38	2.89	8.79	
Rent	1.24	.74	.18	
Insurance	.35	.55	.36	
Total Cash Expenses	$58.41	$65.55	$109.24	

1971 Ohio Farm Business Analysis Report

Corn Silage Enterprise Summary (cont.)

	Top 25%	Middle 50%	Lower 25%	My Farm
Non-Cash Expenses				
Depreciation				
Bldg., Fence & Tile	$ 1.76	$ 1.71	$ 3.27	
Machinery & Equip.	14.60	11.26	15.42	
Total Depreciation	16.37	12.97	18.70	
Unpaid Opr. and Fam. Labor	14.76	16.76	13.55	
Interest Not Charged	22.52	24.29	21.12	
Total Non-Cash Expenses	53.65	54.02	53.37	
TOTAL EXPENSES OF PRODUCTION	112.06	119.58	162.61	
Management Income and Profit	107.53	34.37	-44.27	
Value of Production less Cash Expenses	161.17	88.39	9.09	
Total Investment	413.81	453.63	640.52	
Return on Investment	132.35	61.55	- 5.85	
Percent Return on Investment	31.98%	13.57%	-.91%	
Return to Unpaid Operator and Family Labor, Management and Profit				
Total Per Acre	122.29	51.13	-30.73	
Per Hour	$16.95	$6.06	-$4.73	

RATIO ANALYSIS

Profit Margin	.603	.400	-.049	
Turnover	.531	.339	.185	
Return on Investment	.320	.136	-.009	

1971 Ohio Farm Business Analysis Report

All Owner-Operator & Tenant-Landlord Farms by Net/Hr to

15 Alfalfa Enterprises

	Top 25%	Middle 50%	Lower 25%	My Farm
NUMBER OF FARMS	4	8	3	
GENERAL INFORMATION				
Number of Acres	42	35	10	
Value per ton produced	$33.00	$36.12	$ 22.33	
Cost per ton produced	24.16	41.44	43.15	
PER ACRE INFORMATION				
(The following information is on a per acre basis)	per acre	per acre	per acre	
Tons produced	3.53	2.84	5.93	
Productive Man Work Units	1.02	1.06	1.40	
Value of Labor Used	$21.76	$23.26	$36.90	
TOTAL VALUE OF PRODUCTION	$116.50	$102.60	$132.60	
Cash Expenses				
Hired Labor	$ 6.29	$ 3.51	$ 9.90	
Farm Supplies	2.07	9.06	2.80	
Machine Repairs	8.86	9.23	18.00	
Build, Fence, Etc.		.83	.10	
Fuel Oil & Grease	3.93	5.60	23.70	
Electric	.14	.23		
Telephone	.05	.09		
Misc. Expense	.17	.71	.10	
Seeds & Plants	4.74	5.71	10.40	
Fertilizer Lime	6.45	16.89	14.80	
Machine Hired Trk.	.10	.31		
Auto Expense	.19	.60		
Interest on Notes	3.33	15.14	13.30	
Taxes	4.95	3.71	12.60	
Rent	2.71		1.40	
Insurance	.64	.69	3.70	
Total Cash Expenses	$44.62	$72.31	$110.80	

1971 Ohio Farm Business Analysis Report

Alfalfa Enterprise Summary (cont.)

	Top 25%	Middle 50%	Lower 25%	My Farm
Non-Cash Expenses				
Depreciation				
Bldg., Fence, & Tile	$ .60	$ 1.14	$ 20.50	_____
Machinery & Equip.	8.64	13.14	34.20	_____
Total Depreciation	9.24	14.28	54.70	_____
Unpaid Opr. and Fam. Labor	15.48	19.74	27.00	_____
Interest Not Charged	19.95	11.34	63.40	_____
Total Non-Cash Expenses	44.67	45.37	145.10	_____
TOTAL EXPENSES OF PRODUCTION	85.29	117.69	255.90	_____
Management Income and Profit	27.21	-15.08	-123.30	_____
Value of Production less Cash Expenses	71.88	30.29	21.80	_____
Total Investment	388.12	441.43	1,278.70	_____
Return on Investment	50.48	11.40	-46.60	_____
Percent Return on Investment	13.00%	2.58%	-3.64	_____
Return to Unpaid Operator and Family Labor, Management and Profit				
Total Per Acre	42.69	4.66	-96.20	_____
Per Hour	6.39	.52	-11.92	_____
RATIO ANALYSIS				
Profit Margin	.433	.111	-.351	_____
Turnover	.300	.232	.104	_____
Return on Investment	.130	.026	-.036	_____

1971 Ohio Farm Business Analysis Report

14 Clover-Mixed Hay Enterprises

	Top 25%	Middle 50%	Lower 25%	My farm
NUMBER OF FARMS	4	7	3	
GENERAL INFORMATION				
Number of Acres	31	29	45	
Value per ton produced	$30.50	$29.42	$25.00	
Cost per ton produced	$26.30	$61.68	$67.45	
PER ACRE INFORMATION (The following information is on a per acre basis)	per acre	per acre	per acre	
Tons produced	3.46	1.77	1.61	
Productive Man Work Units	1.29	1.66	1.71	
Value of Labor Used	$27.03	$3.62	$33.07	
TOTAL VALUE OF PRODUCTION	$105.48	$52.00	$40.33	
Cash Expenses				
Hired Labor	$ 6.39	$ 2.59	$25.49	
Farm Supplies	.81	1.14	3.82	
Machine Repairs	8.35	5.48	9.60	
Build Fence, Etc.	.39	.83	.11	
Fuel, Oil & Grse.	6.16	5.24	3.64	
Electric	.16	1.00		
Telephone	.42	.45	.02	
Misc. Expense	.77	.76	.78	
Seeds & Plants	1.68	1.97	1.71	
Fertilizer and Lime	3.19	4.58	2.85	
Machine Hire and Trk.			.20	
Auto Expense	.71	1.31	.02	
Interest on Notes	6.48	4.27	1.80	
Taxes	2.68	3.21	5.38	
Rent		.59	.65	
Insurance	.13	1.24	.20	
Total Cash Expenses	$38.32	$34.66	$56.27	

1971 Ohio Farm Business Analysis Report

Clover-Mixed Hay Enterprise Summary (cont.)

	Top 25%	Middle 50%	Lower 25%	My farm
Non-Cash Expenses				
Depreciation				
Bldg., Fence & Tile	$ 1.55	$ 1.31	$ 1.62	
Machinery & Equip.	13.52	12.10	13.60	
Total Depreciation	15.07	13.41	15.22	
Unpaid Opr. and Fam. Labor	20.66	33.[illegible]	7.58	
Interest Not Charged	16.95	27.79	29.53	
Total Non-Cash Expenses	52.68	74.[illegible]	52.33	
TOTAL EXPENSES OF PRODUCTION	91.00	109.52	108.60	
Management Income and Profit	14.48	-57.[illegible]	-68.27	
Value of Production less Cash Expenses	67.16	17.[illegible]	-15.93	
Total Investment	390.77	534.59	522.24	
Return on Investment	37.90	-25.46	-36.93	
Percent Return on Investment	9.70%	-4.76%	-7.07%	
Return to Unpaid Operator and Family Labor, Management and Profit				
Total Per Acre	35.13	-23.86	-60.69	
Per Hour	$3.58	-[illegible].5	-$22.06	
RATIO ANALYSIS				
Profit Margin	.359	-.490	-.916	
Turnover	.270	.097	.077	
Return on Investment	.097	-.04[illegible]	-.071	

MAJOR IMPROVEMENTS

Two major improvements have been added to the farm records analysis: an expanded enterprise analysis, and a ratio analysis. The enterprise analysis examines each crop enterprise as if each were a separate business. The ratio analysis examines three key areas of a business to help determine how it compares with other businesses. These ratio analysis figures are located at the bottom of page 5 and page 12 for the total farm summaries and the second page of each crop enterprise summary.

The enterprise analysis section, which starts on page 16 of this summary, gives an item by item breakdown of cost and income information for each of seven different crop enterprises. Data for each crop enterprise summary is taken from farms which had the cost and production information necessary to receive an analysis of that particular enterpr-

HOW TO USE THE RATIO ANALYSIS SECTION

The ratio analysis permits a comparison of a business with larger or smaller businesses. Comparison of these ratio figures with state summary figures will quickly indicate how a farm or a particular enterprise compares with others in the state concerning "profit margin", "turnover", and "return on investment".

The "return on investment" figure, called MANAGEMENT INCOME AND PROFIT + PAID AND UNPAID INTEREST ÷ TOTAL INVESTMENT in the printout, gives a good indication of how well the investments in a business are working. If the return on investment figure for a particular business or enterprise is low, that investment is not returning as much as other

similar investments in the state. A closer examination of return on investment can easily be made by looking at the 'profit margin' and "turnover" ratios.

The "profit margin" ratio, referred to as MANAGEMENT INCOME AND PROFIT PLUS PAID AND UNPAID INTEREST ÷ GROSS INCOME on the individual printout, is a measure of the profitability of a business. If the figure is low, the farm or enterprise has less profit for each dollar of product sold than other similar farms or enterprises in the state. This may indicate that expenses are high or sale price is low, or both A look at income figures such as VALUE PER BUSHEL PRODUCED and at cost figures such as COST PER BUSHEL PRODUCED or cost figures per acre will provide a better idea of what is causing profit margin to be low.

The "turnover" ratio called GROSS INCOME ÷ TOTAL INVESTMENT in the individual printout, is a measure of how well investments are being utilized. If the "turnover" ratio is low, the farm or enterprise has less sales for each dollar invested than the farms or enterprises in the state summary. Turnover can be examined more closely by looking at receipts and investments. Such items as TOTAL VALUE OF PRODUCTION PER ACRE and BUSHELS PRODUCED PER ACRE will indicate how an individual's farm receipts compare with those in the state summary. Investments can be examined more closely by comparing such figures as TOTAL INVESTMENT PER CROP ACRE with state summary figures.

An example of how these ratios can be used follows.

EXAMPLE:

General crop farmer John Doe owns and operates a farm in west central Ohio. He notes that the number of farms used in the summary is

small and will keep this in mind when making his comparison. John has a Return on Investment ratio of .100 (or a return on investment of 10%) for his farm. He compares this return with those in the state summary, and finds that his farm is slightly below the top 25% average, but well above the middle 50% average. John decides that he wants to improve his return on investment to the farm. To see where improvements should be made, he compares the two other ratios for his farm with those in the state summary. His profit margin ratio is .350 (or profit and interest per dollar of gross farm income is 35¢), above the average of farms in the upper 25%. However, his turnover ratio is .286 (or gross farm income per $1,000 invested is $286), less than the middle 50% average in the owner-operator and tenant-landlord summary. John also sees that tenant general crop farms have a much higher turnover ratio than owner-operator farms, but maintain a similar profit margin. John would like to improve both of these ratios, but since the turnover ratio is low, he feels it probably holds the most promise for improvement.

To see how this turnover may be improved, John looks at several factors. He finds that his return per crop acre is $86, well below the upper 25% average in the summary. His machinery investment per crop acre of $72 is above the figures in the state summary.

Next, John examines the enterprise summary for each of the crops that he might grow. His corn yield of 108 bushels per acre and value of corn production of $118 per acre are only slightly less than the top 25% average. He compares his corn expenses item by item with

the state summary and finds that his depreciation per acre of $15, value of labor used of $15, machine repair of $5.70, and fuel, oil, and grease of $5.60 per acre are relatively high compared to the state summary. John figures that he may be able to spend less time tilling each acre while covering more acres in the same time to bring these costs down. John looks at the other crops which he might grow. He finds that oats is not very profitable and shows little chance of improvement, while corn and soybeans are profitable and hold much potential improvement for his situation.

Next, John looks at his livestock enterprise. He finds that his return per dollar of feed fed of $1.70 is near the middle 50% average in the summary. Since John has only hogs in his livestock operation, he looks at the state 1971 Swine Summary to see how his return compares with other hog operations. He first notes that, as in the crop summary, there is a small number of farms in the state summary. He finds that his return per $ of feed fed is above the upper 25% average for swine farms. John looks at several other figures in the swine summary and finds that his hog operation compares very well with the performance of other hog operations as shown in the state Swine Summary.

John looks at several other factors and decides he can improve his farm business in several ways, including an increase in corn and soybean acreage, more rented land, elimination of oats, and an increase in the size of his hog operation, while keeping cost increases relatively low. This should improve his turnover as well as his profit margin, and thereby increase his return on investment.

Use of these ratios will permit fast identification of trouble spots and help to locate what is causing them. For questions concerning this analysis, contact your county agent, or the farm management area agent in your area.

GLOSSARY OF SELECTED TERMS

GROSS FARM INCOME - is the sum of all cash receipts plus increases in inventory and capital gains less decreases in inventory, capital losses, and feeder livestock purchases. Feeder livestock purchases are deducted to reflect on farm production.

INTEREST NOT CHARGED - represents an estimated charge for equity capital. It is determined by taking six percent of total investment and subtracting the amount of interest paid during the year. This calculation makes a similar charge for the total investment of each farm business.

UNPAID OPERATOR & FAMILY LABOR - is the wage charge for the operator and unpaid family labor using the time worked and rates per hour estimated by the farm operator.

TOTAL FARM EXPENSE - is the sum of all cash and non-cash expense for the farm less the cost of purchased feeder livestock. Non-cash expense includes depreciation, interest not charged and unpaid operator and family labor charge.

MANAGEMENT INCOME & PROFIT - equals Gross Income minus Total Farm Expense. This represents the return to management income and profit after all cash and non-cash expenses are deducted.

FAMILY LABOR & MANAGEMENT INCOME - equals Management Income and Profit plus Unpaid Operator and Family Labor. This represents the return to the operator and his family for their unpaid labor, management and profit.

NET FARM INCOME - equals Family Labor and Management Income plus Interest Not Charged. This represents the return to the operator for equity capital, unpaid labor, management and profit.

RETURN TO INVESTMENT - equals Management Income and Profit plus paid and unpaid interest. Paid and unpaid interest equals six percent of Total Investment. This represents the return to all capital, owned and borrowed, plus management and profit. This return times 100 divided by Total Investment gives Percent Return On Investment.

OVERHEAD COSTS - is the sum of depreciation, building repairs, interest paid, property taxes, cash rent, insurance and interest not charged. These represent costs that are essentially fixed and must be recovered regardless of the level of production.

VARIABLE COSTS - is the sum of all cash expenses other than those included in Overhead Costs. These costs vary with the level of production.

NUMBER OF MAN-YEAR EQUIVALENTS - represents the number of full-time man equivalents available on the farm for the entire year. Family labor is adjusted to a man-equivalent basis. One man-year equivalent is 3,000 hours.

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* A complete listing of calculations is contained in occasional paper #49, "A Guide To Interpretation of the Computer Printout".

VALUE OF ALL CROPS - represents all crop production valued at market price (not necessarily sold) plus government crop payments.

VALUE OF NET LIVESTOCK INCREASE - is the net value of livestock and livestock products produced during the year. This includes livestock sold less value of feeder livestock plus change in inventory.

RETURN PER $ FEED FED TO ALL LIVESTOCK ENTERPRISES - equals the Value of Net Livestock Increase divided by the Total Value of Feed Fed to All Livestock. The returns per dollar of feed fed should pay for the feed, labor, overhead on buildings and equipment required by livestock, other production costs, and provide a profit.

MACHINERY COST PER CROP ACRE - is the sum of fuel, oil, grease, repairs, and machine hire expenditures plus charges for depreciation and investment, less custom work receipts divided by acres of cropland.

PROFIT MARGIN RATIO - equals Management Income and Profit plus paid and unpaid interest divided by Gross Income. This ratio shows the dollars of profit and interest received from each dollar of gross income.

TURNOVER RATIO - equals Gross Income divided by Total Investment. This ratio is the same as the Gross Income Per $1,000 Invested figure, but is given as a decimal figure rather than a return per $1,000. It gives the dollars of gross income received during the year for each dollar of investment.

RETURN ON INVESTMENT RATIO - equals Management Income and Profit plus paid and unpaid interest divided by Total Investment. This ratio is the same as Percent Return On Investment, but is stated as a decimal rather than a percentage. It gives the dollars of profit and interest received during the year for each dollar of investment.

SAMPLE POPULATION

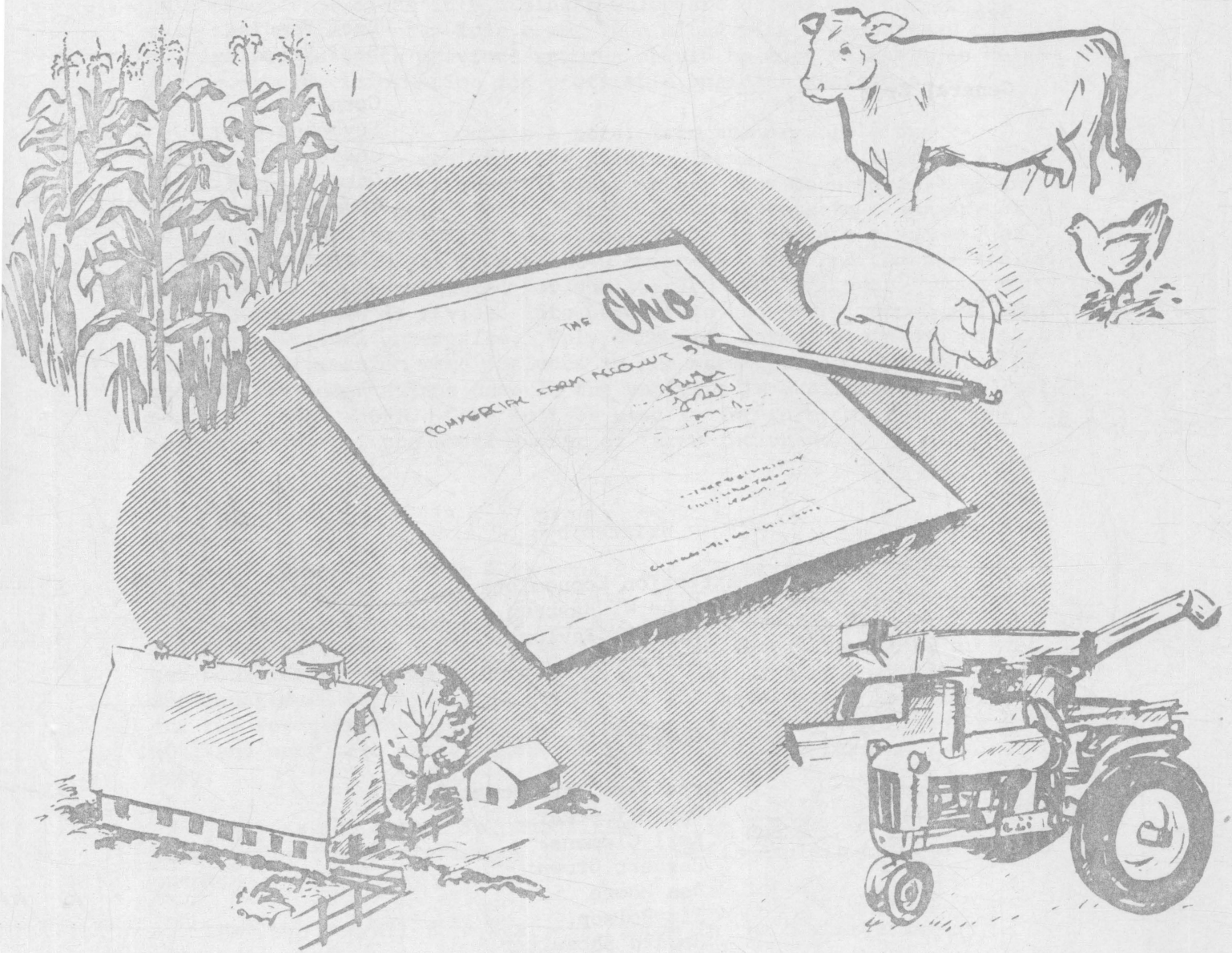
The 12 owner-operator and tenant-landlord general crop farm and 19 tenant general crop farm records summarized in this report are part of the 462 farm records of all types submitted by Ohio farmers to Ohio State University for analysis in 1971. Not all farm records were complete and accurate enough to be used in the summaries. Care must be used in interpreting the summaries, especially where only a small number of farms are included.

SUMMARY DATA

All data included in the tables are either simple averages for all farms in the group or weighted averages comparing two simple averages for that group. For example, Total Crop Acres is a simple average representing the total number of crop acres for any particular group of farms divided by the number of farms in the group. However, Machinery Cost Per Crop Acre is a weighted average calculated by dividing the average Total Machinery Cost for any particular group by the average Total Crop Acres for that group.

Extension MM No. 327
ESO No. 105

1971
Farm Business Analysis Report
Beef Summary



Department of Agricultural Economics and Rural Sociology
COOPERATIVE EXTENSION SERVICE
THE OHIO STATE UNIVERSITY
Columbus, Ohio

SUMMARIES AVAILABLE FOR 1971

TOTAL FARM SUMMARIES	ENTERPRISE SUMMARIES INCLUDED
Dairy	Dairy Milk
Swine	Swine
Beef	Beef Feeding Beef Breeding
General Crop	Corn Soybeans Wheat Oats Corn silage Alfalfa Hay Clover-Mixed Hay

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1971 OHIO FARM BUSINESS ANALYSIS REPORT

BEEF SUMMARY

This summary is designed to help farm businessmen improve their income. Each section is divided into three groups composed of the top 25%, middle 50%, and lower 25% of the farms by return per hour to unpaid labor and management. The report is arranged in a format similar to the computer printout received in the individual farm analysis. Comparison of an individual operation with this summary should help expose the areas in a business which are strong and the areas that need improvement. This comparison along with a comparison of current records with previous records should be most valuable in helping to provide information for profitable business decisions.

Pages 4 through 9 contain a total farm summary of 14 owner-operator and tenant-landlord beef feeding farms. These farms are divided into percentage groups by return per hour to unpaid labor and management for the total farm. Pages 10 and 11 contain a summary of 24 beef feeding enterprises and pages 12 and 13 contain a summary of 10 beef cow enterprises from the 240 owner-operator and tenant-landlord farms of all types submitted for analysis of the 1971 year. Each of these enterprises is divided into percentage groups by return per hour to the individual enterprise. Only data from farms determined to have complete information were included in the summary. An explanation of many of the computations used in the analysis is available on the last pages of this report. Care must be used in interpreting these summaries because of the small number of farms included.

HIGHLIGHTS

The summary on pages 4 through 9 shows that the top 25% of the farms had a return per hour to unpaid labor and management of $10.56. This is nearly four times the average hourly earnings in the middle 50% farms of $2.68, and is much greater than the average loss of -24¢ per hour for the farms in the lower 25%. This return to unpaid labor and management represents 22 percent of the total Gross Farm Income for the farms in the upper 25%, 14 percent for the farms in the middle 50%, and near zero percent for the lower 25% of the farms in the summary.

What is the reason for the difference in SUCCESS or FAILURE on these farms? Several factors in the summaries explain these differences.

For the overall farm analysis, farms in the higher earnings categories had:

1. Lower overhead costs as a percent of gross income.
2. Greater gross farm income per farm (and when calculated a greater gross farm income per man).

3. Greater returns per dollar feed fed. (Top 25% and middle 50% were similar.)

4. Greater livestock income. (The farms in the top 25% sold an average of near 650 fed cattle while farms in the middle 50% and lower 25% sold an average of near 250 and 280 fed cattle.)

5. Machine cost per acre low in relation to value of crop production per acre.

6. Greater profit margin. (Management Income and Profit plus paid and unpaid interest ÷ Gross Income)

7. Greater gross income per $1,000 invested. (greater turnover)

8. Greater percent return on investment. (Management Income and Profit plus paid and unpaid interest ÷ Total Investment)

Of all the farms that were analyzed, 24 had beef feeding enterprises and 10 had beef cow enterprises that were included in the summary. (See pages 9 through 13 for more detail). For these enterprises, the higher earnings categories had:

1. Greater return per dollar of feed fed.

2. Lower labor requirement per cwt beef produced in most cases.

3. Lower total expense per cwt beef produced. In most cases, this included lower cash expenses, lower non-cash expenses, and lower feed expense per cwt beef produced.

4. Lower total investment per cwt beef produced.

5. Greater profit margin. (Management Income and Profit plus paid and unpaid interest ÷ Gross Income)

6. Greater turnover (Value of beef production per $1,000 invested in beef enterprises)

7. Greater return on investment. (Management Income and Profit plus paid and unpaid interest ÷ Total Investment)

SUCCESS or FAILURE depends on whether the business:

1. IS MAKING A PROFIT on each dollar of output.

   Is the cropping program geared to produce maximum net return per crop acre?

   Does the beef operation produce maximum return per dollar of feed fed?

   Is machine cost per crop acre low enough to permit a profit?

2. HAS ENOUGH VOLUME.

Is there enough volume to provide a satisfactory income potential?

Is the business volume large enough to carry the investment and overhead cost in equipment, facilities and other capital resources?

Is the business large enough to provide productive and profitable employment for labor resources?

The high income operators out-performed their competition in both making a profit with each dollar of sales, and having enough volume for the amount of investment and labor available. They managed larger businesses, accomplished more per worker, and used capital resources more effectively. They excelled in performance of their crop and livestock enterprises.

No one factor can be singled out as the basic difference between high and low income farms. For each of the efficiency measures studied, some farms in the low income group ranked near the top. SATISFACTORY INCOMES were the result of above average performance "ACROSS THE BOARD", rather than outstanding achievement in only one or two departments.

1971 OHIO FARM BUSINESS ANALYSIS REPORT

OVERALL BEEF FEEDING FARM SUMMARY

14 OWNER-OPERATOR & TENANT-LANDLORD BEEF FEEDING FARMS

	Rank by Family Labor & Management Income Per Hour to Farm			
	Top 25%	Middle 50%	Lower 25%	My farm
Number of Farms	3	7	4	
INCOME				
Cash Receipts	$240,203	$116,830	$105,993	
Capital Gains and Losses	1,417	996	84	
Inventory Changes	27,749	15,632	20,854	
- Feeder Livestock	-153,971	-54,533	-72,570	
Gross Farm Income	115,398	78,926	54,362	
EXPENSES				
Cash Expenses	222,744	99,400	108,795	
Depreciation	9,164	8,444	7,121	
Interest Not Charged	11,696	14,628	11,810	
Unpaid Operator & Family Labor	7,700	11,602	6,777	
- Feeder Livestock	-153,971	-54,533	-72,570	
Total Farm Expense	97,333	79,541	61,935	
MANAGEMENT INCOME & PROFIT				
Total	18,065	-615	-7,573	
As a Percent of Gross Income	15.7%	-0.8%	-13.9%	
UNPAID OPERATOR & FAMILY LABOR				
Total	7,700	11,602	6,777	
As a Percent of Gross Income	6.7%	14.7%	12.4%	
OVERHEAD COSTS				
Total	38,690	33,155	30,303	
As a Percent of Gross Income	33.5%	42.0%	55.7%	
VARIABLE COSTS				
Total	50,942	34,783	24,854	
As a Percent of Gross Income	44.1%	44.1%	45.7%	
NET CASH INCOME	17,459	17,430	-2,801	
NET FARM INCOME	37,462	25,615	11,015	
INVESTMENT				
Total	355,001	328,493	310,259	
Return to Investment	39,365	19,094	11,042	
Percent Return on Investment	11.1%	5.8%	3.6%	
Gross Income Per $1,000 Invested	325	240	175	
LABOR EFFICIENCY FACTOR	1.345	.826	.912	
TOTAL UNPAID LABOR & MANAGEMENT INCOME				
Total	25,765	10,987	-795	
Hour	$10.56	$2.68	-$.24	

1971 Ohio Farm Business Analysis Report

Overall Beef Feeding Farm Summary

CASH RECEIPTS	Top 25%	Middle 50%	Lower 25%	My farm
Milk and Cream		7,920		
General Crops	10,125	4,810	1,419	
Special Crops		3,889		
Cash Rent and Royalties	333		14	
Labor Off Farm			20	
Custom Work	1,998	291	720	
Wool		27	140	
Tax Refund	183	116	107	
Patronage Dividend	106	48	1	
Miscellaneous Receipts	668	603	113	
Government Payments	3,129	2,416	296	
Government Crop Payments	1,126	591	238	
Market Livestock				
Swine		8,047	5,272	
Cattle	222,531	87,694	97,111	
Lambs		372	538	
Total Cash Receipts	240,203	116,830	105,993	
CASH EXPENSES				
Hired Labor	4,655	4,320	475	
Feed Purchased	26,486	11,055	8,951	
Farm Supplies	1,153	2,808	608	
Machinery Repairs	2,399	2,366	1,142	
Bldg., Fence, Tile, Etc. Repairs	426	1,286	1,536	
Fuel, Oil, and Grease	1,888	1,894	1,564	
Electricity (Farm Share)	589	527	209	
Telephone (Farm Share)	196	227	71	
Miscellaneous Expenses	750	513	381	
Seeds and Plants	1,764	1,844	1,670	
Fertilizer and Lime	8,826	7,011	7,695	
Machine Hire and Trucking	665	916	1,381	
Auto Expense (Farm Share)	699	206	374	
Interest on Notes and Mortgage	9,603	5,081	6,804	
Veterinary and Medicine	867	843	330	
Breeding Fees and Registration		247		
Feeder Livestock Purchase	153,971	54,533	72,570	
Taxes	2,411	2,693	1,719	
Cash Rent	4,549	191	537	
Insurance	840	830	772	
Total Cash Expenses	222,744	99,400	108,795	

1971 Ohio Farm Business Analysis Report

Overall Beef Feeding Farm Summary

CAPITAL GAIN	Top 25%	Middle 50%	Lower 25%	My farm
Raised Breeding Stock	$	$ 975	$ 99	
Purchased Breeding Stock		-15	-15	
Machinery and Equipment	1,417	35		
Total Capital Gain or Loss	1,417	996	84	
NET INVENTORY CHANGE				
Raised Breeding Livestock		-14	1,796	
Market Livestock	18,072	12,605	13,351	
Grain, Hay, Supplement	9,676	2,796	6,207	
Supplies and Fertilizer		244	-500	
Total Inventory Change	27,749	15,632	20,854	
DEPRECIATION				
Buildings, Fence, Etc.	3,085	3,618	2,168	
Machinery and Equipment	6,078	4,538	4,719	
Purchased Breeding Stock		287	233	
Total Depreciation	9,164	8,444	7,121	
CAPITAL INVESTMENT				
Purchased Breeding Stock		1,867	1,140	
Raised Breeding Stock		4,822	3,115	
Market Livestock	104,860	53,000	48,277	
Grain and Hay	26,506	26,215	15,301	
Supplies and Fertilizer	273	3,228	2,250	
Machinery and Equipment	28,956	25,017	30,656	
Buildings, Fence, Tile	43,913	36,466	71,292	
Land (Current Ag. Value)	150,491	177,875	138,227	
Total Capital Investment	355,001	328,493	310,259	
RATIO ANALYSIS				
Profit Margin	.341	.242	.203	
Turnover	.329	.240	.175	
Return on Investment	.111	.058	.036	

1971 Ohio Farm Business Analysis Report

Overall Beef Feeding Farm Summary

LABOR EFFICIENCY Reported Labor Used on Farm	Top 25%	Middle 50%	Lower 25%	My farm
Operators Labor Used				
Hours	2,333.3	2,914.2	2,400.0	_____
Value/Hr	$3.16	$3.00	$2.12	_____
Hours		785.7	750.0	_____
Value/Hr		$2.50	$2.00	_____
Unpaid Family Labor Used				
Wife				
Hours		357.1	160.0	_____
Value/Hr		$1.68	$1.75	_____
Family Labor Over 14				
Hours	133.3	100.0		_____
Value/Hr	$1.50	$1.75		_____
Family Labor Under 14				
Hours		71.4		_____
Value/Hr		$.50		_____
Hired Labor				
Hours	1,086.6	1,868.5	169.7	_____
Value/Hr	$4.28	$2.31	$2.80	_____
Number of Man Equivalent Hours Used	3,526	5,970	3,447	_____
Number of PMWU Used*	352	597	344	_____
Number of Man-Year Equivalents Used	1.17	1.98	1.14	_____
Value of Operators Labor Used	$7,500	$10,742	$6,487	_____
Value of Unpaid Family Labor Used	200	859	290	_____
Value of Hired Labor Used	4,655	4,320	475	_____
Value of Total Labor	12,355	15,922	7,253	_____
Value of Labor Per Man Hour Equivalent	3.50	2.66	2.10	_____
Value of Labor Per PMWU	$35.09	$26.67	$21.08	_____
Value of Labor Per Man-Year Equivalent	$10,559	$8,041	$6,362	_____

*PMWU stands for Productive Man Work Units. One PMWU is equal to one 10 hour day.

1971 Ohio Farm Business Analysis Report

Overall Beef Feeding Farm Summary

CROPS SUMMARY Crop Production	Top 25%	Middle 50%	Lower 25%	My farm
Corn				
Acres	178	153	121	
Yield	122.4 bu.	115.9 bu.	140.7 bu.	
Soybeans				
Acres		28		
Yield		33.8 bu.		
Oats				
Acres	1	9	6	
Yield	46.2 bu.	64.6 bu.	52.4 bu.	
Wheat				
Acres	34	32	10	
Yield	41.6 bu.	47.2 bu.	50.1 bu.	
Alfalfa				
Acres		13	3	
Yield		2.4 T.	2.4 T.	
Clover				
Acres	6	12	4	
Yield	1.7 T.	2.6 T.	2.5 T.	
Corn Silage				
Acres	97	59	91	
Yield	17.4 T.	15.9 T.	12.0 T.	
Haylage				
Acres	5	13	15	
Yield	10.0 T.	10.1 T.	5.0 T.	
General Crop Acres	322	325	268	
Total Harvested Crop Acres	380	365	273	
Value of General Crops	$43,843	$37,099	$36,792	
Value of All Crops	$46,973	$43,422	$37,088	
General Crop Prod. Value/Acre	$136.15	$114.15	$137.28	
All Crop Prod. Value/Acre	$123.61	$118.96	$135.85	
Percent of Gen. Crops in Corn and Soybeans	85.4%	73.8%	79.2%	
Percent Total Tillable Acres in Corn and Soybeans	72.4%	64.9%	77.7%	
Fertilizer and Lime Per Cost Per Acre	$23.23	$18.95	$28.19	
Machinery Investment Per Crop Acre	$76.20	$67.61	$112.29	
Total Power and Machinery Cost	$11,469	$11,130	$10,300	
Machinery Cost Per Crop Acre	$30.18	$30.08	$37.73	

1971 Ohio Farm Business Analysis Report

Overall Beef Feeding Farm Summary

LIVESTOCK SUMMARY	Top 25%	Middle 50%	Lower 25%	My farm
Total Value of Feed Fed to All Livestock Enterprises	$47,339	$37,565	$32,145	_____
Value of Net Livestock Increase	$86,632	$69,206	$45,290	_____
Returns Per $ Feed Fed to All Livestock Enterprises	$1.83	$1.84	$1.41	_____

1971 Ohio Farm Business Analysis Report

23 Beef Feeding Enterprises

	Rank by Family Labor & Management Income per Hour to Beef Feeding Enterprise			
	Top 25%	Middle 50%	Lower 25%	My farm
NUMBER OF FARMS	6	12	5	
GENERAL INFORMATION				
Number of Fed Cattle Sold	410	98	198	
Number of Fed Cattle Sold Per Man Equivalent	854	392	669	
Pounds of Beef Produced	163,819	51,914	72,069	
Pounds of Beef Produced Per Man Equivalent	341,300	207,700	243,500	
Percent Death Loss	0.2%	0.7%	0.2%	
Returns Per $ Feed Fed	$1.90	$1.49	$1.22	
PER CWT INFORMATION (The following information is on a per cwt beef produced basis)	per cwt	per cwt	per cwt	
Productive Man Work Units	.09	.14	.12	
Value of Labor Used	$2.26	$3.48	$2.24	
VALUE OF BEEF PRODUCED Total for Farm*	$32.92	$33.69	$35.55	
Cash Expenses				
Hired Labor	.90	.01	.16	
Feed Purchased	3.09	6.42	4.35	
Farm Supplies	.53	.13	.26	
Machine Repairs	.28	.08	.14	
Build, Fence, Etc.	.19	.40	1.08	
Fuel, Oil & Grease	.09	.10	.17	
Electric	.25	.11	.18	
Telephone	.07	.04	.05	
Misc. Expense	.11	.20	.22	
Machine Hired Trk.	.14	.04	.55	
Auto Expense	.15	.08	.14	
Interest on Notes	1.56	2.39	2.90	
Vet medicine	.16	.37	.17	
Taxes	.25	.44	1.00	
Rent	.14	.01		
Insurance	.21	.16	.66	
Total Cash	8.12	10.98	12.03	

* Feeder livestock purchases have been deducted from this figure to reflect on farm production.

1971 Ohio Farm Business Analysis Report

Beef Feeding Enterprise Summary (cont.)

	Top 25%	Middle 50%	Lower 25%	My farm
Non-Cash Expenses	Per cwt	Per cwt	Per cwt	
Depreciation				
Bldg., Fence, Tile	$ .72	$ .99	$ 1.72	
Machinery & Equip.	.77	.50	.53	
Total Depreciation	1.49	1.49	2.25	
Unpaid Opr. and Fam. Labor	1.36	3.47	2.08	
Interest Not Charged	1.66	1.35	5.72	
Home Grown Feeds	14.21	16.26	24.73	
Total Non-Cash Expenses	18.72	22.57	34.78	
TOTAL EXPENSE OF BEEF PRODUCTION	26.84	33.55	46.81	
Management Income and Profit	6.08	.14	-11.26	
Value of Production - Cash Expenses	24.80	22.71	23.52	
Total Investment	53.67	62.41	143.65	
Return on Investment	9.30	3.88	-2.64	
Percent Return on Investment	17.33%	6.22%	-1.84%	
Total Feed Costs	17.30	22.68	29.08	
Feed Required				
Value of Supplement	2.53	3.75	3.87	
Value of Grain	9.58	10.95	15.74	
Value of Roughages	5.19	7.98	9.47	
Return to Unpaid Operator and Family Labor, Management, and Profit				
Total	$ 7.44	$ 3.61	$-9.18	
Per Hour	17.73	2.58	-8.03	
RATIO ANALYSIS				
Profit Margin	.283	.115	-.074	
Turnover	.613	.540	.248	
Return on Investment	.173	.062	-.018	

1971 Ohio Farm Business Analysis Report

10 Beef Breeding Enterprises

	Rank by Family Labor & Management Income per Hour to Beef Breeding Enterprise			
	Top 25%	Middle 50%	Lower 25%	My farm
NUMBER OF FARMS	3	5	2	
GENERAL INFORMATION				
Number of Cows Bred to Calve	20.6	65.6	8.0	
Percent of Calf Crop	86.8%	94.4%	100.0%	
Pounds of Beef Produced	15,516	25,819	6,282	
Pounds of Beef Prod. Per Cow	*	394	*	
Returns Per $ Feed Fed	*	$1.92	$1.73	
PER CWT INFORMATION (The following information is on a per cwt beef produced basis)	Per cwt	Per cwt	Per cwt	
Productive Man Work Units	.21	.42	.48	
Value of Labor Used	$4.51	$8.38	$14.06	
VALUE OF BEEF PRODUCTION				
Total for Farm	$41.27	$34.79	$35.40	
Cash Expenses				
Hired Labor	$	$1.54	$	
Feed Purchased	1.02	.88	1.26	
Farm Supplies	.86	.22	.06	
Machine Repairs	.59	.32	.08	
Build, Fence, Etc.	1.29	.22	1.46	
Fuel, Oil & Grse.	.14	.17	.19	
Electric	.10	.07	.49	
Telephone	.08	.03	.19	
Misc. Expense	1.06	.31	.17	
Machine and Hiring Trk.	.07	.02	.75	
Auto Expense	.05	.14	.40	
Interest on Notes	.86	.50	.80	
Vet Medicine	.30	.13	1.58	
Breeding Fees		.06	1.20	
Taxes	.44	.43	1.00	
Rent			.25	
Insurance	.34	.45	.59	
Total Cash Expenses	$7.20	$5.49	$10.47	

*These figures have been omitted because of unrealistic averages resulting from the small number of farms in the summary.

Beef Breeding Enterprise Summary (cont.)

	Top 25%	Middle 50%	Lower 25%	My farm
	Per cwt	Per cwt	Per cwt	
Non-Cash Expenses				
Depreciation				
Bldg., Fence & Tile	$ .33	$ .34	$ 5.90	
Machinery & Equip.	.99	.53	2.21	
Purchased Brdg. Stk.	.56	.83		
Total Depreciation	1.88	1.70	8.11	
Unpaid Opr. and Fam. Labor	4.52	6.85	14.07	
Interest Not Charged	1.40*	4.62	5.94	
Home Grown Feeds	8.79	17.24	19.27	
Total Non-Cash Expenses	15.59	30.41	47.39	
TOTAL EXPENSE OF BEEF PRODUCTION	23.79	35.91	57.86	
Management Income and Profit	17.48	-1.19	-22.46	
Value of Production Less Cash Expenses	34.07	29.30	24.93	
Total Investment	37.55 *	35.44	112.19	
Return on Investment	19.73	4.00	-15.74	
Percent Return on Investment	52.5% *	4.68%	-14.03%	
Total Feed Costs	9.81 *	18.12	20.53	
Feed Required				
Value of Supplement		.54	.64	
Value of Grain	.51	.79	.27	
Value of Roughage	9.30	16.79	19.62	
Return to Unpaid Operator and Family Labor, Management and Profit				
Total per cwt	$21.99	$5.72	-$8.40	
Per hour	$10.65	$1.61	-$1.74	
RATIO ANALYSIS				
Profit Margin	.478	.115	-.445	
Turnover	1.099	.407	.316	
Return on Investment	.525	.047	-.140	

***These figures are not typical for most beef cow enterprises. The exceptionally low feed cost and investment may have resulted from improper allocation of expenses and investment.**

MAJOR IMPROVEMENTS

Two major improvements have been added to the farm records analysis: an expanded enterprise analysis, and a ratio analysis. The enterprise analysis examines the beef feeding and beef cow enterprises as if each was a separate business. The ratio analysis examines three key areas of a business to help determine how it compares with other businesses. These ratio analysis figures are located at the bottom of page 6 for the total farm summary and pages 11 and 13 for the beef enterprises.

The enterprise analysis section, which starts on page 10 of this summary, gives an item by item breakdown of cost and income information for the beef enterprises. Data for the beef enterprise summaries is taken from farm analyses which had the cost and production information necessary to compute an analysis of that particular enterprise.

HOW TO USE THE RATIO ANALYSIS SECTION

The ratio analysis section permits a comparison of a business with larger or smaller businesses. Comparison of these ratio figures with state summary figures will quickly indicate how a farm or a particular enterprise compares with others in the state concerning "profit margin", "turnover", and "return on investment".

The "return on investment" figure, called MANAGEMENT INCOME AND PROFIT + PAID AND UNPAID INTEREST ÷ TOTAL INVESTMENT in the printout, gives a good indication of how well the investments in a business are working. If the return on investment figure for a particular business or enterprise is low, that investment is not returning as much as other similar investments in the state. A closer examination of return on investment can easily be made by looking at the "profit margin" and "turnover" ratios.

The "profit margin" ratio, referred to as MANAGEMENT INCOME AND PROFIT ÷ PAID AND UNPAID INTEREST ÷ GROSS INCOME on the individual printout, is a measure of the profitability of a business. If the figure is low, the farm or enterprise has less profit for each dollar of product sold than other similar farms or enterprises in the state. This may indicate that expenses are high or sale price is low, or both. A look at income figures such as VALUE PER CWT OF BEEF PRODUCED or RETURN PER FEED FED and at cost figures per cwt will provide a better idea of what is causing profit margin to be low.

The "turnover" ratio, called GROSS INCOME ÷ TOTAL INVESTMENT in the individual printout, is a measure of how well investments are being utilized. If the "turnover" ratio is low, the farm or enterprise has less sales for each dollar invested than the farms or enterprises in the state summary. Turnover can be examined more closely by looking at receipts and investments. Such items as TOTAL VALUE OF PRODUCTION PER CWT BEEF PRODUCED or GENERAL CROP PRODUCTION VALUE PER ACRE will indicate how an individual farm's receipts compare with those in the state summary. Investments can be examined more closely by comparing such figures as TOTAL INVESTMENT PER CWT BEEF PRODUCED or MACHINERY INVESTMENT PER CROP ACRE with state summary figures.

An example of how these ratios can be used follows.

EXAMPLE:

John Doe, a cattle feeder in Northern Ohio would like to improve the profitability of his business as much as possible. He notes that the number of farms in the state summary is small, and will keep this in mind when making his comparison. His farm has a Return on Investment

ratio for 1971 of .081 (or a return on investment of 8.1%). He compares this return with those in the state summary, and finds that his farm is below the top 25% average, but well above the middle 50% average. John decides that he wants to improve his return on investment to the farm. To see where improvements should be made, he compares the two other ratios for his farm with those in the state summary. His profit margin ratio is .350 (or profit and interest per dollar of gross farm income is 35¢), slightly above the average of farms in the upper 25%. However, his turnover ratio is .231 (or gross farm income per $1,000 invested is $231), less than the middle 50% average in the summary. John would like to improve both of these ratios, but since the turnover ratio is low, he feels it probably holds the most promise for improvement.

To see how his turnover may be improved, John looks at several factors. He finds that his return per crop acre is $128, somewhat greater than the figures in the state summary. His machinery investment of $102 per crop acre is high in comparison to the upper 25% and middle 50% figures in the state summary. To further examine his crop situation, John examines the state crop summary. After looking at the crops in the summary which he might grow, John thinks that several improvements can be made in his crop operation such as growing less oats and clover, growing more corn and alfalfa, and renting more crop land.

Next John looks at his livestock enterprise. He finds that his return per dollar of feed fed of $1.80 is near the upper 25% and middle 50% figures in the state summary. He looks further and finds that his return per cwt beef produced of $34.00 is relatively high in comparison

with the state summary. John thinks he can maintain the relatively high sale price for his cattle. His percent death loss over the past several years of 0.1% is low compared with the summary figures. Pounds of beef produced per man equivalent is relatively low at 200,000 pounds per man. His investment per cwt beef produced is in line with the top 25% at $50.00. John thinks he can increase the number of cattle sold per year to help reduce overhead expenses and labor expenses per cwt beef sold, increase return per dollar of feed fed, and increase beef feeding enterprise turnover and profit.

John looks at several other factors and decides he can improve his farm business in several ways, including an increase in number of cattle fed per year, a change in crops grown, and an increase in the number of crop acres, while keeping cost increases relatively low. This should improve his turnover as well as his profit margin, and thereby increase his return on investment.

Use of these ratios will permit fast identification of trouble spots and help to locate what is causing them. For questions concerning this analysis, contact your county agent or farm management area agent in your area.

GLOSSARY OF SELECTED TERMS*

GROSS FARM INCOME - is the sum of all cash receipts plus increases in inventory and capital gains less decreases in inventory, capital losses, and feeder livestock purchases. Feeder livestock purchases are deducted to reflect on farm production.

INTEREST NOT CHARGED - represents an estimated charge for equity capital. It is determined by taking six percent of total investment and subtracting the amount of interest paid during the year. This calculation makes a similar charge for the total investment of each farm business.

UNPAID OPERATOR & FAMILY LABOR - is the wage charge for the operator and unpaid family labor using the time worked and rates per hour estimated by the farm operator.

TOTAL FARM EXPENSE - is the sum of all cash and non-cash expense for the farm less the cost of purchased feeder livestock. Non-cash expense includes depreciation, interest not charged and unpaid operator and family labor charge.

MANAGEMENT INCOME & PROFIT - equals Gross Income minus Total Farm Expense. This represents the return to management income and profit after all cash and non-cash expenses are deducted.

FAMILY LABOR & MANAGEMENT INCOME - equals Management Income and Profit plus Unpaid Operator and Family Labor. This represents the return to the operator and his family for their unpaid labor, management and profit.

NET FARM INCOME - equals Family Labor and Management Income plus Interest Not Charged. This represents the return to the operator for equity capital, unpaid labor, management and profit.

RETURN TO INVESTMENT - equals Management Income and Profit plus paid and unpaid interest. Paid and unpaid interest equals six percent of Total Investment. This represents the return to all capital, owned and borrowed, plus management and profit. This return times 100 divided by Total Investment gives Percent Return On Investment.

OVERHEAD COSTS - is the sum of depreciation, building repairs, interest paid, property taxes, cash rent, insurance and interest not charged. These represent costs that are essentially fixed and must be recovered regardless of the level of production.

VARIABLE COSTS - is the sum of all cash expenses other than those included in Overhead Costs. These costs vary with the level of production.

NUMBER OF MAN-YEAR EQUIVALENTS - represents the number of full-time man equivalents available on the farm for the entire year. Family labor is adjusted to a man-equivalent basis. One man-year equivalent is 3,000 hours.

* A complete listing of calculations is contained in occasional paper #49, "A Guide To Interpretation of the Computer Printout".

VALUE OF ALL CROPS - represents all crop production valued at market price (not necessarily sold) plus government crop payments.

VALUE OF NET LIVESTOCK INCREASE - is the net value of livestock and livestock products produced during the year. This includes livestock sold less value of feeder livestock plus change in inventory.

RETURN PER $ FEED FED TO ALL LIVESTOCK ENTERPRISES - equals the Value of Net Livestock Increase divided by the Total Value of Feed Fed to All Livestock. The returns per dollar of feed fed should pay for the feed, labor, overhead on buildings and equipment required by livestock, other production costs, and provide a profit.

MACHINERY COST PER CROP ACRE - is the sum of fuel, oil, grease, repairs, and machine hire expenditures plus charges for depreciation and investment, less custom work receipts divided by acres of cropland.

PROFIT MARGIN RATIO - equals Management Income and Profit plus paid and unpaid interest divided by Gross Income. This ratio shows the dollars of profit and interest received from each dollar of gross income.

TURNOVER RATIO - equals Gross Income divided by Total Investment. This ratio is the same as the Gross Income Per $1,000 Invested figure, but is given as a decimal figure rather than a return per $1,000. It gives the dollars of gross income received during the year for each dollar of investment.

RETURN ON INVESTMENT RATIO - equals Management Income and Profit plus paid and unpaid interest divided by Total Investment. This ratio is the same as Percent Return On Investment, but is stated as a decimal rather than a percentage. It gives the dollars of profit and interest received during the year for each dollar of investment.

SAMPLE POPULATION

The 14 owner-operator and tenant-landlord beef feeding farm records summarized in this report are part of the 462 farm records of all types submitted by Ohio farmers to Ohio State University for analysis in 1971. Not all farm records were complete and accurate enough to be used in the summaries. Care must be used in interpreting the summaries, especially where only a small number of farms are included.

SUMMARY DATA

All data included in the tables are either simple averages for all farms in the group or weighted averages comparing two simple averages for that group. For example, Total Crop Acres is a simple average representing the total number of crop acres for any particular group of farms divided by the number of farms in the group. However, Machinery Cost Per Crop Acre is a weighted average calculated by dividing the average Total Machinery Cost for any particular group by the average Total Crop Acres for that group.

Extension No. MM-331
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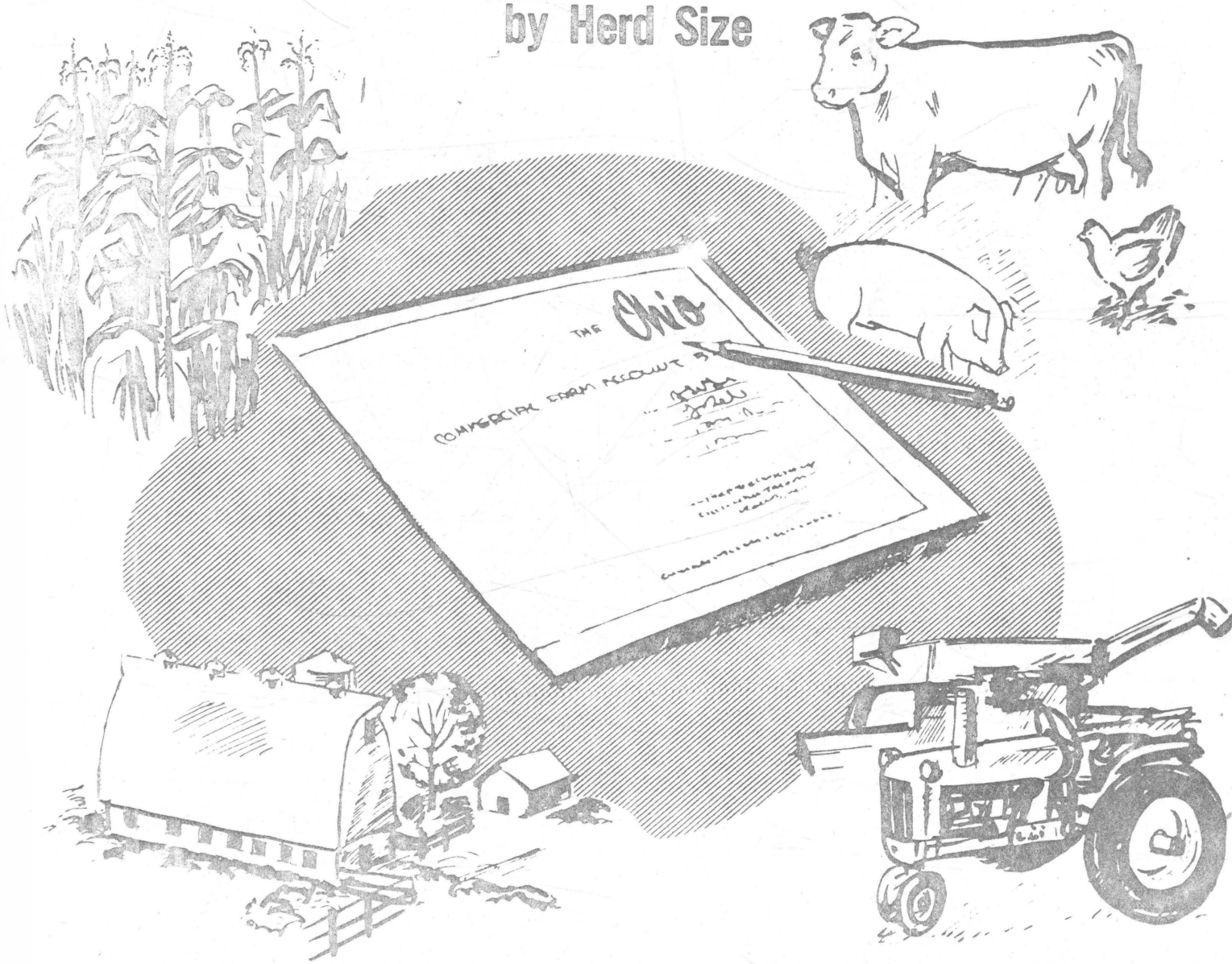
1971
Farm Business Analysis Report
Dairy Summary
by Herd Size



Department of Agricultural Economics and Rural Sociology
COOPERATIVE EXTENSION SERVICE
THE OHIO STATE UNIVERSITY
Columbus, Ohio

1971 Ohio Farm Business Analysis Summary

Dairy Farms by Size of Herd

by
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John W. Bastian
Reed D. Taylor
John E. Moore

Introduction

This report summarizes information from records of 190 Ohio dairy farms by herd sizes of less than 40 cows, 40 to 79 cows, and 80 or more cows. Overall farm summaries and enterprise summaries are divided into four groups composed of the top 10 percent, top 25 percent, middle 50 percent, and lower 25 percent of the farms by return per hour to unpaid labor and management for the total farm. Comparison of these summaries provides differences in costs and returns for various herd sizes. A glossary of terms is available in the 1971 Farm Business Analysis Report, Dairy Summary, Extension MM No. 324.

Differences Between Herd Sizes

The first table summarizes income data for the three herd sizes. As expected, gross income, total expense, and total investment are greater with larger herd size. In addition, larger farms generated more net income. Both net farm income and family labor and management income were greater with larger herd size. Returns to labor per hour also increased with herd size as family labor and management income per hour ranged from an average of $2.00 for the smaller herds, to $3.47 for the largest herds. Return on investment also increased with herd size with an average of 4.6 percent on the small herds, 5.3 percent on the 40 to 79 cow herds and 7.5 percent on the largest herds. Thus, not only did

1971 OHIO FARM BUSINESS ANALYSIS SUMMARY

For Dairy Farms

	Unit	Farms by Herd Size: Less Than 40 Cows	40-79 Cows	80 Or More Cows	All
INCOME					
Cash Receipts	$	32,937	45,615	93,848	46,543
Capital Gains and Losses	$	2,029	3,574	8,372	3,539
Inventory Changes	$	2,424	3,016	6,304	3,201
Feeder Livestock Purchase	$	687	39	72	333
Gross Income*	$	36,703	52,166	108,452	52,950
EXPENSES					
Cash Expenses	$	21,421	30,262	67,524	31,406
Depreciation	$	4,047	6,342	12,446	6,150
Interest Not Charged	$	3,893	5,633	10,998	5,589
Unpaid Operator & Family Labor	$	9,328	10,873	13,686	10,567
Total Farm Expense*	$	38,002	53,071	104,582	53,379
MANAGEMENT INCOME & PROFIT					
Total	$	-1,299	-905	3,870	-429
As a Percent of Gross Income	%	-3.5	-1.7	3.6	-.8
UNPAID OPERATOR & FAMILY LABOR					
Total	$	9,328	10,873	13,686	10,567
As a Percent of Gross Income	%	25.4	20.8	12.6	19.9
OVERHEAD COSTS					
Total	$	12,136	18,004	37,303	18,020
As a Percent of Gross Income	%	33.1	34.5	34.4	34.0
VARIABLE COSTS					
Total	$	16,538	24,202	53,593	24,795
As a Percent of Gross Income	%	45.1	46.4	49.4	46.8
NET CASH INCOME	$	11,516	15,353	26,324	15,137
NET FARM INCOME	$	11,922	15,601	28,554	15,727
INVESTMENT					
Total	$	94,662	132,394	255,389	132,345
Return to Investment	$	4,380	7,038	19,193	7,512
Profit Margin (Percent of Gross)	%	11.9	13.5	17.7	14.2
Turnover (Gross Per $1 Invested)	$	.388	.394	.425	.400
Return on Investment (Percent)	%	4.6	5.3	7.5	5.7
FAMILY LABOR & MANAGEMENT INCOME					
Total	$	8,029	9,968	17,556	10,138
Per Hour	$	2.00	2.34	3.47	2.38
NUMBER OF MEN (M.Y.E.)		1.59	2.02	3.36	2.01
NUMBER OF COWS	Hd.	29.7	54.2	106.4	50.4
NUMBER OF FARMS	No.	85	79	26	190

* Feeder livestock purchases are not included in either total.

the larger herds generate more volume, they achieved a greater return to labor and management (Family Labor and Management Income), to capital and management (Return to Investment), and to all unpaid factors of production (Net Farm Income).

Comparison With 1970 Results

Farm business records for 1970 and 1971 do not include all the same farms. However, a comparison of a large number of the same type of farms for year to year can indicate some of the general changes taking place.

Physical measures of size were similar for farms summarized in both 1970 and 1971. The 190 herds summarized for 1971 used about the same size labor force and milked about the same number of cows within each of the three size groups as did the 250 herds summarized in 1970. However, average gross income and total investment was greater for each group in 1971.

Size	Unit	Less Than 40 Cows		40-79 Cows		80 or More Cows	
		1970	1971	1970	1971	1970	1971
Gross Income	$	29,974	36,703	48,738	52,166	101,112	108,452
Total Investment	$	74,987	94,662	120,607	132,394	244,640	255,389
Number of Men	M.Y.E.	1.49	1.59	1.90	2.02	3.33	3.36
Number of Cows	Head	31.3	29.7	52.2	54.2	106.4	106.4
Income							
Net Farm Income	$	10,687	11,992	15,884	15,601	30,635	28,554
Family Labor and Management Income	$	7,387	8,029	11,186	9,968	19,963	17,556
Return to Investment	$	6,668	4,380	10,771	7,038	20,827	19,193

For the most, income was down somewhat from 1970. Net farm income increased slightly for the small herds, but declined for the two larger herd sizes. Similarly, family labor and management income increased for the small herds, and declined 10 percent or more for the medium and large size herds. On return to investment the small and medium size herds were down nearly one-third, while the large herds dropped nearly one-tenth.

Overall, net farm income is the one measure of return to all unpaid resources, and it shows only a small change in returns from 1970.

Costs of Producing Milk [1/]

One of the more easily recognized measures of financial health for a dairy operation is to compare the costs of milk production with the price being received for milk. In the summary milk production costs are separated into cash and non-cash categories, plus some additional break-out of items within each of these categories. Cash expenses are broken down to expenditures for purchased feed, hired labor and other cash expenses. Non-cash charges are allocated for depreciation, unpaid labor, interest on equity capital, and the value of home grown feeds.

The distribution of these items show that feed costs accounted for nearly one-half of the total cost of producing milk for each size of herd (Figure 1). Labor charges accounted for another 25 percent, and all other cash and non-cash expenses made up the rest. Thus, it is evident that when feed prices change, there is a marked effect on the cost of producing milk.

The distribution of costs by size of herd illustrates the decreased importance of unpaid family labor as herd size increases. However, expenditures for purchased feed and hired labor are greater per cwt. of milk produced for the larger herds. Thus, the larger herds have a greater proportion of their milk production cost as cash expenses, which must be covered to stay in business.

While not shown in this chart additional analysis indicated that total feed cost (Home grown and Purchased) could be broken down as: ¼ for supplement, ¼ for concentrates, and ½ for roughage. This division was roughly true for each herd size. From this, individuals could

1/ All pounds of milk produced are adjusted to a 3.5% butterfat basis. Thus a producer with 500,000 lbs. of milk that averaged 3.6% butterfat, would have 514,286 lbs. on a 3.5 basis. Also cost and value per cwt. are on a net farm basis, with hauling and marketing charges excluded from both.

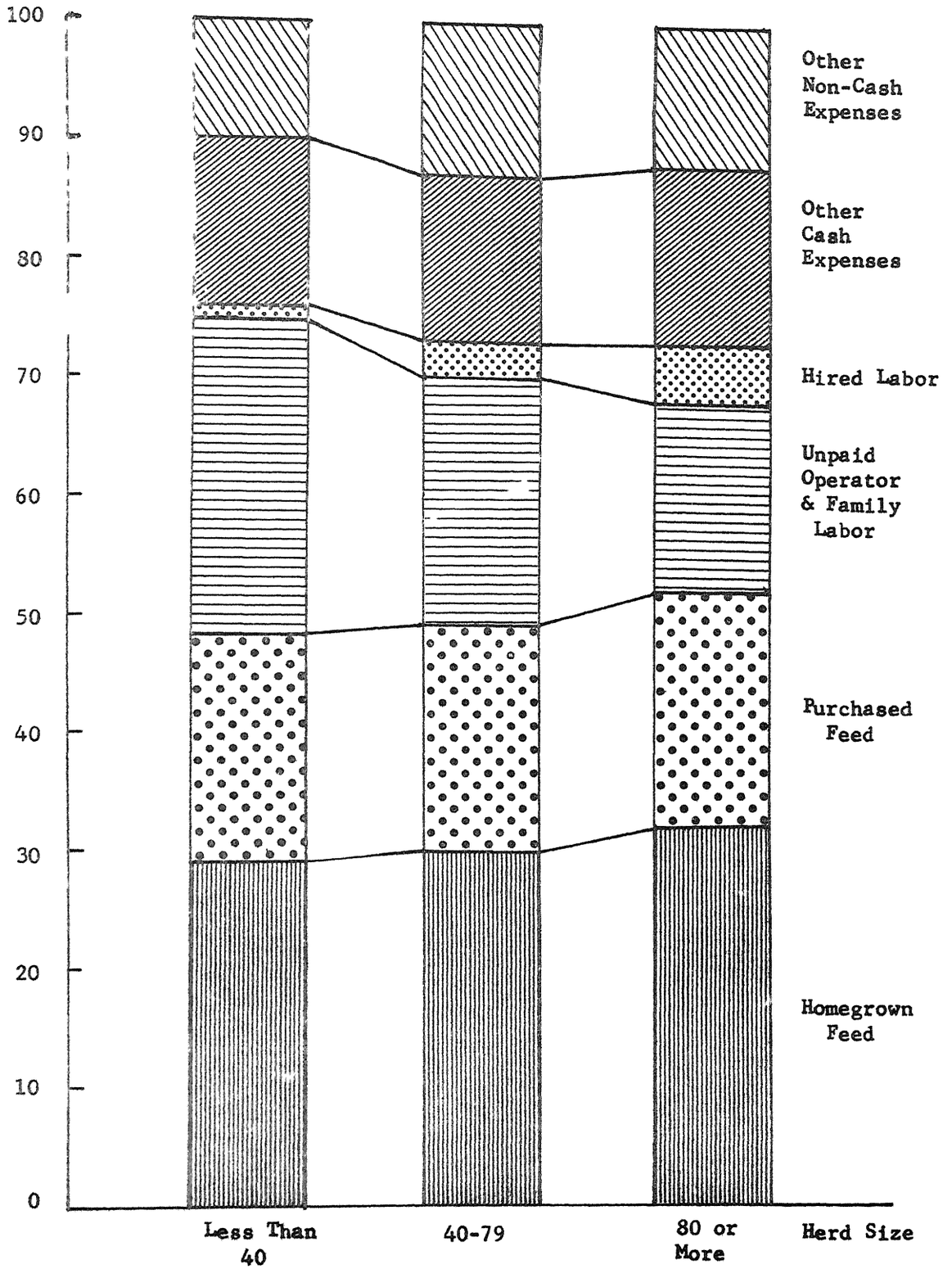


FIGURE 1

PERCENT OF MILK PRODUCTION COSTS BY SIZE OF HERD, OHIO, 1971 (MIDDLE 50%)

roughly estimate the potential effect on their cost of milk production from the higher feed costs existing this year.

Looking at actual costs per cwt. showed large differences between averages of the most efficient and least efficient producers within each herd size (Figure 2)[2/]. For herds of less than 40 cows this difference was $1.77, with $1.60 the range for herds of 40-79 cows, and a $1.05 difference for herds of 80 or more cows. This difference was much greater than differences between herd sizes. The farms in the top 25 percent of each herd size differed by a maximum of $.15, the middle 50 percent by $.59, and the low 25 percent by $.81. Thus, it appears economies of size were less important in keeping costs of production low than overall efficiency in holding down costs.

While size economies did not appear to be very evident among the large dairy producers, their were differences in the makeup of the costs. Cash outlays made up a greater proportion of total costs for the 80 plus cows producers. Purchased feed, hired labor, and other cash expenses all represented larger shares of the total cost. The major offsetting factor here was the smaller percentage of costs representing unpaid operator and family labor. However, while the cost for unpaid labor is less per cwt. of milk, total return to unpaid labor for the farm was greater because of the greater volume.

Differences Within Herd Size

The following tables have selected data for all farms within each herd size ranked by family labor and management income per hour. All factors, both for the total farm and for the dairy and milk enterprise relate to this total farm income ranking.

2/ Farms were ranked by the return per hour of Family Labor & Management Income. Each group was then divided into the top 25%, middle 50%, and low 25% of farms for summarization. Where sample size permitted, the top 10% were also summarized.

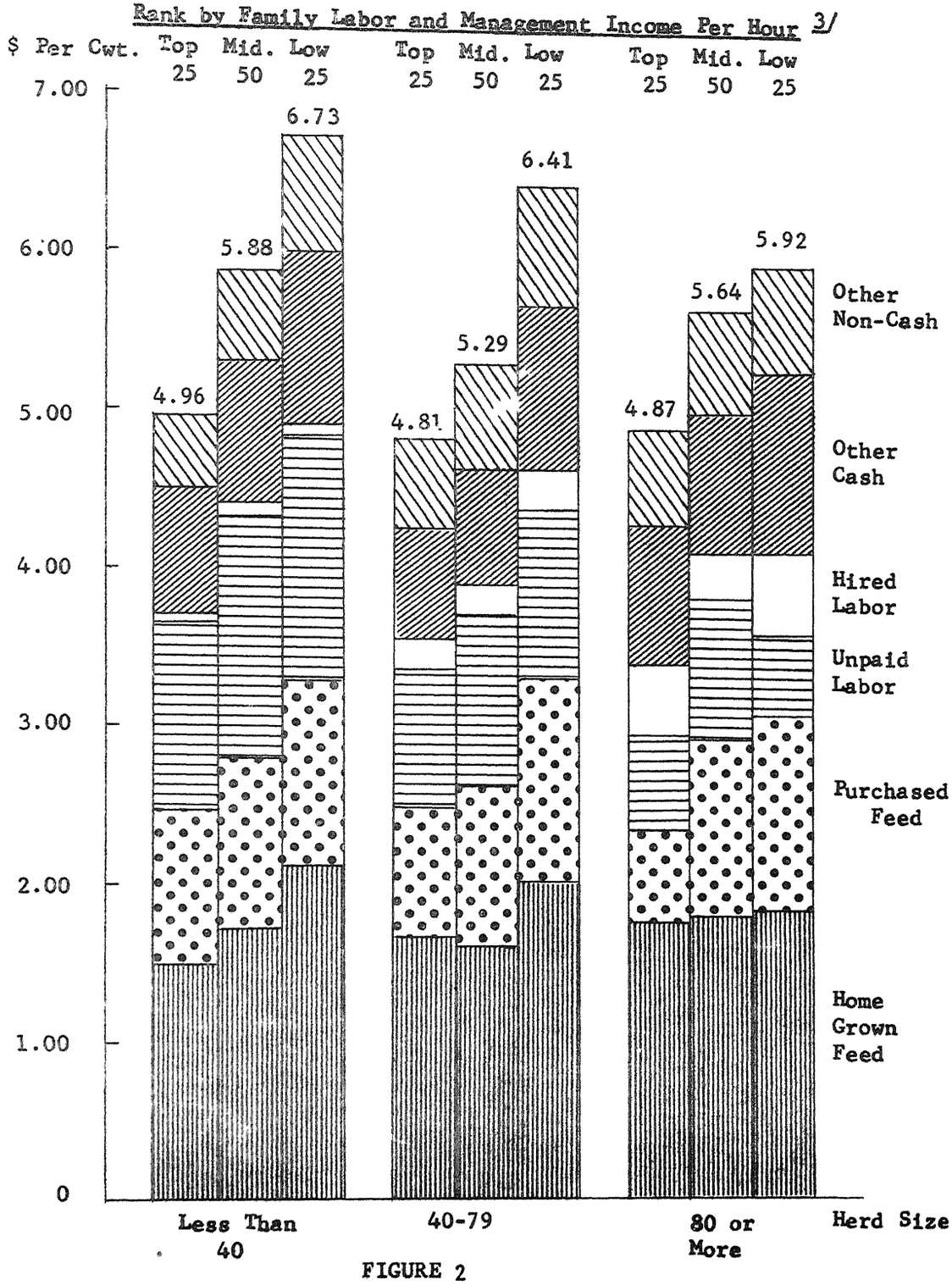


FIGURE 2

COST OF PRODUCING MILK, BY SIZE OF HERD AND FAMILY LABOR AND MANAGEMENT INCOME RANK, OHIO, 1971.

3/ See footnote 2 on page 6.

These tables reveal the large variations that exist even within farms having similar size herds. This illustrates further the importance of an individual farmer having his own summary, so he can evaluate his particular situation and determine what is responsible for the success or failure of his operation.

Highlights

Several items in the summaries showed similar differences between the high and low return groups for all herd sizes and will be noted first. However, some factors seemed to vary differently depending on herd size and these will be noted separately.

For all herd sizes, farms in the higher earnings categories generally had:

1. Lower overhead costs as a percent of gross income;
2. Lower variable costs as a percent of gross income;
3. Greater volume: gross income, pounds of milk sold, and crop acres.

However, the low 25 percent generally equaled or exceeded the middle 50 percent in capital investment and herd size, thus suggesting potential inefficiency.

4. Higher value of crop production per acre--the exception was on the 80 and over herd size.
5. Lower machinery cost per crop acre.
6. Lower milk production costs per cwt.
7. Higher milk production per cow--In the 40-79 cow group, the upper 25 percent had a higher average than the upper 10 percent.
8. Other dairy performance factors were generally better for the high profit groups.

1971 OHIO FARM BUSINESS ANALYSIS SUMMARY

TYPE OF FARM — DAIRY, LESS THAN 40 COWS

	Unit	Rank by Family Labor & Management Income: Upper 10%	Upper 25%	Middle 50%	Lower 25%	My Farm
INCOME						
Cash Receipts	$	50,348	47,136	30,197	24,348	____
Capital Gains and Losses	$	3,252	2,811	1,991	1,325	____
Inventory Changes	$	5,314	4,189	1,707	2,127	____
Feeder Livestock Purchase	$	3,668	2,125	26	601	____
Gross Income*	$	55,246	52,012	33,870	27,200	____
EXPENSES						
Cash Expenses	$	28,636	28,683	19,084	18,944	____
Depreciation	$	5,336	5,479	3,553	3,625	____
Interest Not Charged	$	4,585	4,017	3,928	3,698	____
Unpaid Operator & Family Labor	$	9,942	9,376	9,490	8,950	____
Total Farm Expense*	$	44,833	45,431	36,029	34,618	____
MANAGEMENT INCOME & PROFIT						
Total	$	10,413	6,580	-2,159	-7,417	____
As a Percent of Gross Income	%	18.8	12.7	-6.4	-27.3	____
UNPAID OPERATOR & FAMILY LABOR						
Total	$	9,942	9,376	9,490	8,950	____
As a Percent of Gross Income	%	18.0	18.0	28.0	32.9	____
OVERHEAD COSTS						
Total	$	14,896	15,156	11,196	11,042	____
As a Percent of Gross Income	%	27.0	29.1	33.1	40.6	____
VARIABLE COSTS						
Total	$	19,994	20,899	15,343	14,625	____
As a Percent of Gross Income	%	36.2	40.2	45.3	53.8	____
NET CASH INCOME	$	21,711	18,452	11,113	5,404	____
NET FARM INCOME	$	24,941	19,974	11,259	5,231	____
INVESTMENT						
Total	$	102,297	107,136	90,720	90,260	____
Return to Investment	$	16,550	13,008	3,283	-2,002	____
Profit Margin (Percent of Gross)	%	30.0	25.0	9.7	-7.4	____
Turnover (Gross Per $1 Invested)	$	.540	.485	.373	.301	____
Return on Investment (Percent)	%	16.2	12.1	3.6	-2.2	____
FAMILY LABOR & MANAGEMENT INCOME						
Total	$	20,355	15,956	7,330	1,532	____
Per Hour	$	5.14	4.21	1.90	.30	____
NUMBER OF FARMS	No.	8	21	43	21	____

* Feeder livestock purchases are not included in either total.

1971 OHIO FARM BUSINESS ANALYSIS SUMMARY

TYPE OF FARM — DAIRY, LESS THAN 40 COWS

	Unit	Rank by Family Labor & Management Income: Upper 10%	Upper 25%	Middle 50%	Lower 25%	My Farm
SIZE OF BUSINESS						
Number of Men (M.Y.E.)	M.Y.E.	1.47	1.58	1.60	1.57	____
Number of Cows	Hd.	30.7	28.8	30.8	28.4	____
Pounds of 3.5 Milk Sold	#	452,107	420,249	414,254	315,004	____
Total Crop Acres	A.	226	206	143	130	____
Corn Acres	A.	91	70	33	28	____
Soybean Acres	A.	7	5	12	1	____
Capital Investment	$	102,297	107,136	90,720	90,260	____
Gross Income	$	55,246	52,012	33,870	27,200	____
Value of All Crops	$	19,879	19,516	12,005	9,873	____
Value of Net Livestock Increase	$	46,000	46,069	29,953	25,250	____
EFFICIENCY FACTORS						
Gross Income Per Man	$	37,582	32,919	21,169	17,325	____
Total Labor & Management Income Per Man	$	13,847	10,099	4,581	976	____
Crop Production Value Per Acre	$	88	95	84	76	____
Machinery Cost Per Crop Acre	$	38	42	41	50	____
MILK PRODUCTION COSTS PER CWT.						
Purchased Feed	$	1.07	.99	1.07	1.16	____
Hired Labor	$	.02	.03	.09	.06	____
Other Cash	$	.85	.80	.89	1.10	____
Total Cash Expenses	$	1.94	1.82	2.05	2.32	____
Depreciation	$	.28	.28	.31	.40	____
Unpaid Labor	$	1.11	1.19	1.52	1.56	____
Interest not Charged	$	.32	.18	.28	.34	____
Home Grown Feeds	$	1.40	1.49	1.72	2.11	____
Total Non-Cash Expenses	$	3.11	3.14	3.83	4.41	____
Total Cost of Milk Sold	$	5.05	4.96	5.88	6.73	____
DAIRY PERFORMANCE FACTORS						
Value of Milk Sold, Per Cwt.	$	5.60	5.48	5.67	5.41	____
Pounds of 3.5 Milk Sold Per Cow	#	14,727	14,592	13,450	11,092	____
Value of Milk Sold Per Cow	$	825	800	762	601	____
Pounds of 3.5 Milk Sold Per Man						
Total Farm	#	307,555	265,980	258,908	200,639	____
Enterprise Only	#	708,972	606,987	467,510	379,582	____
Number of Cows Per Man						
Total Farm	Hd.	20.9	18.2	19.2	18.1	____
Enterprise Only	Hd.	40.2	35.5	29.4	28.4	____
Value of Dairy Increase	$	4,617	3,830	3,752	3,058	____
Value of Milk Sold	$	25,320	23,027	23,478	17,059	____
Total Value of Dairy Production	$	29,937	26,858	26,610	20,118	____
Value of Production Per Cow	$	975	933	864	708	____
Dairy Returns Per $1 Feed Fed	$	2.25	2.19	2.03	1.66	____

1971 OHIO FARM BUSINESS ANALYSIS SUMMARY

TYPE OF FARM — DAIRY, 40-79 COWS

	Unit	Rank by Family Labor & Management Income: Upper 10%	Upper 25%	Middle 50%	Lower 25%	My Farm
INCOME						
Cash Receipts	$	59,853	53,314	44,349	40,177	____
Capital Gains and Losses	$	3,593	3,943	3,802	2,704	____
Inventory Changes	$	7,743	5,318	3,269	60	____
Feeder Livestock Purchase	$			56	43	____
Gross Income*	$	71,190	62,576	51,364	42,899	____
EXPENSES						
Cash Expenses	$	32,515	31,563	28,785	32,002	____
Depreciation	$	7,214	6,454	6,300	6,313	____
Interest Not Charged	$	6,816	5,824	5,437	5,843	____
Unpaid Operator & Family Labor	$	11,283	10,597	11,744	9,330	____
Total Farm Expense*	$	57,829	54,439	52,211	53,445	____
MANAGEMENT INCOME & PROFIT						
Total	$	13,361	8,137	-846	-10,545	____
As a Percent of Gross Income	%	18.8	13.0	-1.6	-24.6	____
UNPAID OPERATOR & FAMILY LABOR						
Total	$	11,283	10,597	11,744	9,330	____
As a Percent of Gross Income	%	15.8	16.9	22.9	21.7	____
OVERHEAD COSTS						
Total	$	20,094	18,606	17,252	18,917	____
As a Percent of Gross Income	%	28.2	29.7	33.6	44.1	____
VARIABLE COSTS						
Total	$	26,451	25,235	23,214	25,197	____
As a Percent of Gross Income	%	37.2	40.3	45.2	58.7	____
NET CASH INCOME	$	27,338	21,751	15,563	8,175	____
NET FARM INCOME	$	31,461	24,558	16,335	4,627	____
INVESTMENT						
Total	$	142,133	137,085	122,156	149,010	____
Return to Investment	$	21,888	16,362	6,482	-1,605	____
Profit Margin (Percent of Gross)	%	30.7	26.1	12.6	-3.7	____
Turnover (Gross Per $1 Invested)	$	.501	.456	.420	.288	____
Return on Investment (Percent)	%	15.4	11.9	5.3	-1.1	____
FAMILY LABOR & MANAGEMENT INCOME						
Total	$	24,644	18,734	10,897	-1,215	____
Per Hour	$	7.02	5.20	2.44	-.30	____
NUMBER OF FARMS	No.	7	20	40	19	____

* Feeder livestock purchases are not included in either total.

1971 OHIO FARM BUSINESS ANALYSIS SUMMARY

TYPE OF FARM — DAIRY, 40-79 COWS

	Unit	Rank by Family Labor & Management Income: Upper 10%	Upper 25%	Middle 50%	Lower 25%	My Farm
SIZE OF BUSINESS						
Number of Men (M.Y.E.)	M.Y.E.	2.09	1.89	2.00	2.20	
Number of Cows	Hd.	60.6	58.1	51.6	55.6	
Pounds of 3.5 Milk Sold	#	844,205	813,191	697,893	642,044	
Total Crop Acres	A.	300	228	195	188	
Corn Acres	A.	76	56	53	53	
Soybean Acres	A.	39	13	5	2	
Capital Investment	$	142,133	137,085	122,156	149,010	
Gross Income	$	71,190	62,576	51,364	42,899	
Value of All Crops	$	31,572	22,594	17,258	16,398	
Value of Net Livestock Increase	$	56,446	54,626	46,564	39,377	
EFFICIENCY FACTORS						
Gross Income Per Man	$	34,062	33,109	25,682	19,499	
Total Labor & Management Income Per Man	$	11,791	9,912	5,449	-552	
Crop Production Value Per Acre	$	105	99	88	87	
Machinery Cost Per Crop Acre	$	34	43	46	49	
MILK PRODUCTION COSTS PER CWT.						
Purchased Feed	$	.67	.84	.98	1.27	
Hired Labor	$	.25	.18	.16	.27	
Other Cash	$	.55	.69	.75	1.03	
Total Cash Expenses	$	1.47	1.71	1.89	2.57	
Depreciation	$	.29	.28	.41	.41	
Unpaid Labor	$	.87	.88	1.11	1.07	
Interest not Charged	$	.28	.28	.25	.34	
Home Grown Feeds	$	1.92	1.66	1.63	2.02	
Total Non-Cash Expenses	$	3.36	3.10	3.40	3.84	
Total Cost of Milk Sold	$	4.83	4.81	5.29	6.41	
DAIRY PERFORMANCE FACTORS						
Value of Milk Sold, Per Cwt.	$	5.39	5.58	5.53	5.48	
Pounds of 3.5 Milk Sold Per Cow	#	13,931	13,996	13,525	11,548	
Value of Milk Sold Per Cow	$	750	780	747	633	
Pounds of 3.5 Milk Sold Per Man						
Total Farm	#	403,926	430,259	348,946	291,838	
Enterprise Only	#	735,200	718,336	572,122	450,097	
Number of Cows Per Man						
Total Farm	Hd.	29.0	30.7	25.8	25.3	
Enterprise Only	Hd.	42.9	42.1	35.0	33.9	
Value of Dairy Increase	$	6,936	7,475	6,550	3,259	
Value of Milk Sold	$	45,516	45,354	38,617	35,185	
Total Value of Dairy Production	$	52,452	52,829	45,167	38,444	
Value of Production Per Cow	$	865	909	875	691	
Dairy Returns Per $1 Feed Fed	$	2.07	2.27	2.12	1.72	

1971 OHIO FARM BUSINESS ANALYSIS SUMMARY

TYPE OF FARM — DAIRY, 80 OR MORE COWS

	Unit	Rank by Family Labor & Management Income: Upper 25%	Middle 50%	Lower 25%	My Farm
INCOME					
Cash Receipts	$	128,528	78,711	86,185	
Capital Gains and Losses	$	11,851	8,349	4,365	
Inventory Changes	$	15,521	5,372	-2,431	
Feeder Livestock Purchase	$	81		220	
Gross Income*	$	155,819	92,433	87,900	
EXPENSES					
Cash Expenses	$	86,676	56,861	68,283	
Depreciation	$	15,505	10,627	12,818	
Interest Not Charged	$	14,768	9,074	10,769	
Unpaid Operator & Family Labor	$	16,185	14,315	9,407	
Total Farm Expense*	$	133,054	90,879	101,058	
MANAGEMENT INCOME & PROFIT					
Total	$	22,765	1,554	-13,158	
As a Percent of Gross Income	%	15.2	0.8	-16.5	
UNPAID OPERATOR & FAMILY LABOR					
Total	$	16,185	14,315	9,407	
As a Percent of Gross Income	%	9.9	15.8	12.2	
OVERHEAD COSTS					
Total	$	46,976	32,333	36,786	
As a Percent of Gross Income	%	30.1	35.1	42.2	
VARIABLE COSTS					
Total	$	69,892	44,230	54,864	
As a Percent of Gross Income	%	44.4	48.0	61.9	
NET CASH INCOME	$	41,851	21,850	17,902	
NET FARM INCOME	$	53,719	24,944	7,018	
INVESTMENT					
Total	$	319,876	209,790	278,952	
Return to Investment	$	41,957	14,141	3,578	
Profit Margin (Percent of Gross)	%	26.9	15.3	4.1	
Turnover (Gross Per $1 Invested)	$	.487	.441	.315	
Return on Investment (Percent)	%	13.1	6.7	1.3	
FAMILY LABOR & MANAGEMENT INCOME					
Total	$	38,951	15,869	-3,750	
Per Hour	$	9.55	2.61	-1.00	
NUMBER OF FARMS	No.	7	13	6	

* Feeder livestock purchases are not included in either total.

1971 OHIO FARM BUSINESS ANALYSIS SUMMARY

TYPE OF FARM — DAIRY, 80 OR MORE COWS

	Unit	Rank by Family Labor & Management Income: Upper 25%	Middle 50%	Lower 25%	My Farm
SIZE OF BUSINESS					
Number of Men (M.Y.E.)	M.Y.E.	3.66	3.41	2.89	
Number of Cows	Hd.	136.4	95.1	96.1	
Pounds of 3.5 Milk Sold	#	1,914,938	1,299,769	1,312,868	
Total Crop Acres	A.	514	297	290	
Corn Acres	A.	110	88	76	
Soybean Acres	A.	52	4	5	
Capital Investment	$	319,876	209,790	278,952	
Gross Income	$	155,819	92,433	87,900	
Value of All Crops	$	53,319	30,561	34,998	
Value of Net Livestock Increase	$	136,602	80,376	77,618	
EFFICIENCY FACTORS					
Gross Income Per Man	$	42,573	27,106	30,415	
Total Labor & Management Income Per Man	$	10,642	4,654	-1,297	
Crop Production Value Per Acre	$	104	103	121	
Machinery Cost Per Crop Acre	$	45	51	50	
MILK PRODUCTION COSTS PER CWT.					
Purchased Feed	$	.59	1.11	1.22	
Hired Labor	$	.45	.26	.50	
Other Cash	$	.87	.88	1.15	
Total Cash Expenses	$	1.91	2.25	2.87	
Depreciation	$	.30	.40	.48	
Unpaid Labor	$	.60	.90	.51	
Interest not Charged	$	.29	.27	.20	
Home Grown Feeds	$	1.77	1.82	1.86	
Total Non-Cash Expenses	$	2.96	3.39	3.05	
Total Cost of Milk Sold	$	4.87	5.64	5.92	
DAIRY PERFORMANCE FACTORS					
Value of Milk Sold, Per Cwt.	$	5.80	5.37	5.36	
Pounds of 3.5 Milk Sold Per Cow	#	14,039	13,667	13,661	
Value of Milk Sold Per Cow	$	815	734	734	
Pounds of 3.5 Milk Sold Per Man					
Total Farm	#	523,207	381,164	454,279	
Enterprise Only	#	867,456	571,571	711,207	
Number of Cows Per Man					
Total Farm	Hd.	37.3	27.9	33.3	
Enterprise Only	Hd.	48.9	37.5	45.3	
Value of Dairy Increase	$	22,302	8,442	6,883	
Value of Milk Sold	$	111,149	69,776	70,434	
Total Value of Dairy Production	$	133,451	78,219	77,317	
Value of Production Per Cow	$	978	822	804	
Dairy Returns Per $1 Feed Fed	$	2.25	1.90	1.73	

Cooperative Extension Service

AGRICULTURE/HOME ECONOMICS/NATURAL RESOURCES

January 18, 1973

Area Farm Management Agents
Farm Management Staff

Dear Co-Workers:

Enclosed are copies of the part owner - part tenent general crop farm summary and the sheep enterprise summary These summaries will not be available for general distribution. The sheep enterprise summary should be used with caution as many of the figures are questionable.

Yours truly,

John E. Moore & Bill Bastian
Extension Economist
Farm Management

Enclosure

JEM/mb

1971 OHIO FARM BUSINESS ANALYSIS REPORT

PART OWNER-PART TENANT GENERAL CROP

FARMS BY NET/HR. TO TOTAL FARM

Rank by Family Labor & Management Income Per Hour to Farm

	Top 25%	Middle 50%	Lower 25%	My Farm
NUMBER OF FARMS	7	14	8	
INCOME				
Cash Receipts	$45,693	$47,220	$28,200	
Capital Gains and Losses	11	334	13	
Inventory Changes	13,686	2,942	-53	
- Feeder Livestock	-3,246	-1,117	-302	
Gross Farm Income	$56,144	$49,379	$27,858	
EXPENSES				
Cash Expenses	$28,002	$28,934	$21,536	
Depreciation	5,788	7,028	4,974	
Interest Not Charged	6,501	4,362	1,070	
Unpaid Operator and Family Labor	6,292	7,387	7,486	
- Feeder Livestock	-3,246	-1,117	-302	
Total Farm Expense	$43,339	$46,595	$34,765	
MANAGEMENT INCOME & PROFIT				
Total	$12,805	$2,784	-$6,907	
As a Percent of Gross Income	22.8%	5.6%	-24.8%	
UNPAID OPERATOR & FAMILY LABOR				
Total	$6,292	$7,387	$7,486	
As a Percent of Gross Income	11.2%	15.0%	26.9%	
OVERHEAD COSTS				
Total	$19,823	$18,555	$11,920	
As a Percent of Gross Income	35.3%	37.6%	42.8%	
VARIABLE COSTS				
Total	$17,223	$20,652	$15,358	
As a Percent of Gross Income	30.7%	41.8%	55.1%	
NET CASH INCOME	$17,690	$18,285	$6,664	
NET FARM INCOME	$25,599	$14,533	$1,650	
INVESTMENT				
Total	$158,031	$121,566	$79,783	
Return to Investment	22,287	10,078	-2,120	
Percent Return on Investment	14.1%	8.3%	-2.7%	
Gross Income Per $1,000 Invested	355	406	349	
LABOR EFFICIENCY FACTOR	1.337	.973	.719	
TOTAL UNPAID LABOR & MANAGEMENT INCOME				
Total	$19,098	$10,171	$579	
Hour	7.34	3.49	.18	

1971 Ohio Farm Business Analysis Report

General Crop Summary

	Top 25%	Middle 50%	Lower 25%	My Farm
CASH RECEIPTS				
Milk and Cream			$ 1,577	
Poultry and Eggs			42	
General Crops	$30,667	$34,041	21,923	
Special Crops	1,328	3,895		
Cash Rent and Rovalties		120	18	
Labor Off Farm	335	181	12	
Custom Work	1,640	1,746	1,856	
Wool	37	45	6	
Other Livestock Products				
Tax Refund	265	198	91	
Patronage Dividend	110	68	44	
Breeding Fees Received				
Miscellaneous Receipts	914	238	106	
Government Payments	2,578	2,819	1,825	
Government Crop Payments	335	111		
Market Livestock				
Swine	4,787	1,280	542	
Cattle	2,551	2,202	117	
Veal Calves				
Lambs	140	269	35	
Total Cash Receipts	$45,693	$47,220	$28,200	
CASH EXPENSES				
Hired Labor	$ 984	$ 1,591	$ 1,137	
Feed Purchased	989	1,216	504	
Farm Supplies	2,342	2,462	586	
Machinery Repairs	2,307	2,079	1,997	
Bldg., Fence, Tile, Etc. Repairs	335	390	315	
Fuel, Oil, and Grease	2,138	2,228	1,802	
Electricity (Farm Share)	185	295	210	
Telephone (Farm Share)	109	119	101	
Miscellaneous Expenses	324	328	673	
Seed and Plants	1,221	2,467	1,652	
Fertilizer and Lime	5,244	6,652	5,283	
Machine Hire and Trucking	879	885	806	
Auto Expense (Farm Share)	434	183	579	
Interest On Notes and Mortgage	2,979	2,931	3,716	
Veterinary and Medicine	62	67	21	
Breeding Fees and Registration		74	1	
Feeder Livestock Purchase	3,246	1,117	302	
Taxes	1,152	1,036	903	
Cash Rent	1,976	2,155	642	
Insurance	1,088	650	298	
Total Cash Expenses	$28,002	$28,934	$21,536	

1971 Ohio Farm Business Analysis Report

General Crop Summary

	Top 25%	Middle 50%	Lower 25%	My Farm
CAPITAL GAIN				
Raised Breeding Stock		355	$86	
Purchased Breeding Stock		-30		
Machinery and Equipment	$11	288	-72	
Total Capital Gain or Loss	$11	$334	$15	
NET INVENTORY CHANGE				
Raised Breeding Livestock	$ -60	$ 19	$ 164	
Market Livestock	2,988	646	566	
Grain, Hay, Supplement	10,850	2,087	-814	
Supplies and Fertilizer	-92	188	30	
Total Inventory Change	13,686	2,942	-53	
DEPRECIATION				
Buildings, Fence, Etc.	1,835	1,258	212	
Machinery and Equipment	3,953	5,709	4,746	
Purchased Breeding Stock		60	16	
Total Depreciation	5,788	7,028	4,974	
CAPITAL INVESTMENT				
Purchased Breeding Stock	34	820	162	
Raised Breeding Stock	222	664	955	
Market Livestock	3,543	1,553	490	
Grain and Hay	25,531	17,849	3,353	
Supplies and Fertilizer	508	551	46	
Machinery and Equipment	25,125	25,226	23,203	
Buildings, Fence, Tile	14,399	13,788	8,525	
Land (Current Ag. Value)	88,667	61,110	43,046	
Total Capital Investment	$158,031	$121,566	$79,783	
RATIO ANALYSIS				
Profit Margin	.397	.204	.076	
Turnover	.355	.406	.349	
Return on Investment	.141	.083	.027	

1971 Ohio Farm Business Analysis Summary

General Crop Summary

	Top 25%	Middle 50%	Lower 25%	My Farm
LABOR EFFICIENCY				
Reported Labor Used on Farm				
Operators Labor Used				
First Operator				
Hours	2,023.7	2,274.5	2,025.0	
Value/Hr.	$2.46	$2.75	$2.23	
Second Operator				
Hours	351.1	358.9	375.0	
Value/Hr.	$1.75	$2.50	$2.10	
Unpaid Family Labor Used				
Wife				
Hours	250.0	143.5	657.5	
Value/Hr.	$2.00	$1.92	$1.98	
Family Labor Over 14				
Hours		130.3	331.2	
Value/Hr.		$1.60	$1.83	
Family Labor Under 14				
Hours	51.4	125.0	143.7	
Value/Hr.	$ .50	$1.00	$1.33	
Hired Labor				
Hours	175.8	893.2	273.2	
Value/Hr.	$5.60	$1.78	$4.16	
Number of Man Equivalent Hours Used	2,776	3,808	3,536	
Number of PMWU Used	277	380	353	
Number of Man-Year Equivalents Used	.91	1.26	1.17	
Value of Operators Labor Used	$5,795	$6,799	$5,300	
Value of Unpaid Family Labor Used	497	587	2,186	
Value of Hired Labor Used	984	1,591	1,137	
Value of Total Labor	$7,276	$8,978	8,624	
Value of Labor Per Man Hour Equivalent	2.62	2.36	2.44	
Value of Labor Per PMWU	$26.26	$23.62	$24.43	
Value of Labor Per Man-Year Equivalent	$7,995	$7,125	$7,370	

1971 Ohio Farm Business Analysis Report

General Crop Summary

	Top 25%	Middle 50%	Lower 25%	My Farm
CROPS SUMMARY				
Crop Production*				
Corn				
Acres**	207	252	223	_____
Yield**	80.4 bu.	72.3 bu.	129.1 bu.	_____
Soybeans				
Acres**	233	159	134	_____
Yield**	28.2 bu.	20.7 bu.	22.7 bu.	_____
Oats				
Acres**	30	18	14	_____
Yield**	73.8 bu.	70.1 bu.	50.6 bu.	_____
Wheat				
Acres**	48	52	35	_____
Yield**	37.8 bu.	36.3 bu.	35.4 bu.	_____
Clover				
Acres**	1	3	8	_____
Yield**	2.0 ton	2.1 ton	1.6 ton	_____
General Crop Acres	526	497	422	_____
Total Harvested Crop Acres	577	558	468	_____
Value of General Crops	$43,689	$35,861	$41,845	_____
Value of All Crops	$47,190	$44,059	$43,671	_____
General Crop Prod. Value/Acre	$83.05	$72.15	$99.15	_____
All Crop Prod. Value/Acre**	$81.78	$78.95	$93.31	_____
Percent of Gen. Crops in Corn and Soybeans	83.6%	82.7%	84.6%	_____
Percent Total Tillable Acres in Corn and Soybeans	76.2%	73.7%	76.3%	_____
Fertilizer and Lime Cost Per Acre	$ 9.09	$11.92	$11.29	_____
Machinery Investment Per Crop Acre	43.54	45.21	49.58	_____
Total Power and Machinery Cost	9,579	10,852	9,467	_____
Machinery Cost Per Crop Acre	$16.60	$19.45	$20.23	_____
LIVESTOCK SUMMARY				
Total Value of Feed Fed to all Livestock Enterprises	$3,330	$2,479	$1,498	_____
Value of Net Livestock Increase	7,198	4,492	2,833	_____
Returns Per $ Feed Fed to all Livestock Enterprises	$2.16	$1.81	$1.90	_____

* A few farms produced crops such as alfalfa, other hay or sugar beets which were not included in this list.

** Yield, income and expense is for operator's share only. Total amounts per acre may be somewhat greater than listed figures.

1971 Ohio Farm Business Analysis Report

Sheep Enterprise – [illegible]

	Top [illegible]	[illegible] of	Bottom 25	[illegible] For
NUMBER OF FARMS	-	-	4	
GENERAL INFORMATION				
Sheep Performance				
Average Number of Ewes	41.0	71.2	55.5	
Number of Ewes Exposed	48.0	72.8	53.5	
Lamb Crop Per Ewe Exposed	1.3	1.0	1.15	
Lbs. Wool Per Ewe	38.3	34.5	28.5	
Gross Income Per Ewe	60.78	34.82	31.60	
Pounds of Lamb Produced	15,611	36,619	13,765	
Pounds of Lamb Produced Per Man Equivalent	106,385	101,539	101,439	
Returns Per $ Feed Fed	2.13	1.79	0.41	
PER CWT INFORMATION (The following information is on a per cwt sheep produced basis)	Per cwt	Per cwt	Per cwt	
Productive Man Work Units	.22	.20	.30	
Value of Labor Used	5.81	4.08	7.36	
VALUE OF LAMB, MUTTON, AND WOOL PRODUCTION				
Total for Farm	15.06	7.24	4.68	
Cash Expenses				
Hired Labor	1.25	.06		
Feed Purchased	1.47	.90	3.10	
Farm Supplies	.19	.19	.55	
Machine Repairs	.16	.01		
Build, Fence, Etc.	.48	.28	.46	
Fuel, Oil & Grse.	.16	.02		
Electric	.16	.02	.12	
Telephone	.13	.03	.02	
Misc. Expense	.20	.22	.50	
Machine Hired trk.	.32	.14		
Auto Expense	.03	.04	.65	
Interest On Notes	.10	.25	.73	
Vet Medicine	.32	.05	.65	
Breeding Fees	.06		.01	
Taxes	.28	.17	.09	
Rent		.04		
Insurance	.11	.08	.25	
Total	5.43	2.49	7.12	

1971 Ohio Farm Business Analysis Report

Sheep Enterprise Summary (cont.)

	Top 25% per cwt	Middle 50% per cwt	Lower 25% per cwt	My Farm
Non-cash Expenses				
Depreciation				
Bldg Fence Tile	1.67	.12	.69	
Machinery & Equip.		.07	.38	
Purchased Brdg. Stk.	.48	.48	.90	
Total Depreciation	2.08	.68	1.97	
Unpaid Opr. and Fam. Labor	4.56	4.01	7.36	
Interest not Charged	2.46	.10	1.24	
Home Grown Feeds	4.37	3.29	8.74	
Total Non-cash Expenses	13.47	8.09	19.34	
TOTAL EXPENSES	18.91	10.59	26.47	
Management Income and Profit	-2.95	-3.35	-21.79	
Value of Production - Cash Expenses	10.52	4.74	-2.47	
Total Investment	42.60	5.83	32.82	
Return on Investment	-.39	-3.00	-19.83	
Percent Return on Investment	-.9%	-51.4%	-60.4%	
Total Feed Costs	5.84	4.06	11.43	
Feed Required to Produce CWT of Lamb and Mutton				
Pounds of Supplement		10.86	10.62	
Pounds of Grain	38.56	74.78	115.76	
Pounds of Roughages - Hay Equivalent	76.86	91.21	304.21	
Value of Supplement	1.47	.74	1.28	
Value of Grain	.69	1.62	2.91	
Value of Roughage	3.68	1.69	7.21	
Return to Unpaid Operator and Family Labor, Management and Profit				
Total per cwt	1.61	.67	-14.43	
Per hour	1.12	.40	-5.66	
RATIO ANALYSIS				
Profit Margin	-.024	-.413	-4.238	
Turnover	.375	1.243	.143	
Return on Investment	-.009	-.514	-.604	

APPENDIX I

Correspondence

1. Letter to Hospital Computer Center concerning computer summary program.

2. General letter to agents.

3. General letter to agents.

4. General letter to agents.

5. Memorandum reminding state staff and Hospital Computer personnel of meeting to be held September 22.

6. Letter documenting changes to be made to Farm Business Analysis program.

7. General letter to agents with pertinent materials enclosed.

8. Letter sent to Agriculture College personnel accompanying copies of Farm Business Analysis summaries.

9. General letter to county agriculture agents.

THE OHIO STATE UNIVERSITY

TO: Joe Smith and Ron Childers

FROM. Reed Taylor and Bill Bastian DATE. February 28, 1972

SUBJECT: State Summaries on the Year-End Farm Business Analysis

Confirming our conference on February 22, the following information is provided concerning requirements for the Year-End Farm Business Analysis Summaries.

1. Time: The program is to be operational by April 1, 1972. Summaries are to be run beginning April 15, 1972.

2. Categories Within Summaries: Any summary will be divided into four major categories based on farm efficiency. The efficiency factor to be used is "Hourly Return to Unpaid Operator and Family Labor, Management, and Profit." The four categories are:

   a) Top 10 percent of farms

   b) Top 25 percent of farms (included top 10 percent)

   c) Middle 50 percent of farms

   d) Lower 25 percent of farms

3. Summaries Could Be Required on Any One Or Combination of the Following Factors:

TOTAL FARM	ENTERPRISES
Year	00 All Crops
Area	01 Corn
County	02 Soybeans
Type of Farm	03 Oats and/or Speltz
Ownership Type	04 Wheat
Farm Number	10 Alfalfa Hay
	11 Clover, Mixed Hay
	21 Corn Silage
	51 Dairy
	52 Swine
	53 Feeder Cattle
	55 Sheep

In order to effect a summary on the listed factors it will be necessary to save hourly return to unpaid operator and family labor, management, and profit for the total farm, and each of the listed enterprises.

It would be a good idea to obtain cards containing the above information during the analysis of each of the individual farms. Cards obtained could be used for sorting and ranking. Once ranked, the farms would be divided into the four categories mentioned in (2).

4. Processing: Once the farms for each category in a particular summary are determined, raw data coefficients will be summed and input data for a given category will be analyzed as if it were a separate entity. Once the analysis is made, part of the information will be saved and reported as calculated while part of the information will be divided by the number of participants--in the case of the total farm, participants would be the total number of farms in the category; in the case of any enterprise, the number of participants would be the number of farms in the category who reported on that particular enterprise. Items to be reported as calculated are those reporting percentages, hourly figures, the labor efficiency factor, ~~and any per unit~~ figures. Figures to be divided are those where figures show summations of all farms in the category. A copy of the large example farm is included to show which items should be reported as calculated, and which require division. Items that should be reported as calculated are circled in red ink. The logic is to come up with a farm that represents the "average" for any category within any summary. Percentages and per unit figures will be on a "weighted" basis.

5. Dr. Duvick has requested, if possible, that some additional information be provided on cards during the processing of individual farms. This information could be provided on three cards which Dr. Duvick has formated. See attached.

6. If you have additional questions concerning the logic or details of the summaries, please contact us. We would rather get them squared away now than later.

7. A cover page should be provided for each category for each summary. The cover page includes the following items of information.

   A. The Year
   B. What the summary is—i.e., summary of dairy operations in the Wooster area.
   c. The Category--i.e., the top 10 percent.
   d. The number of farms in the category and the number of participants for each analyzed enterprise.
   e. If possible, a listing of the farm numbers for the category and for each enterprise within the category.

cc: David H. Boyne
John E. Moore
Richard Duvick

THE OHIO STATE UNIVERSITY

TO: County Agents, Area Supervisors, and Area Farm Management Agents

FROM: Reed Taylor and Bill Bastian DATE: February 28, 1972

SUBJECT: Deadline on submitting 7363 forms on the Year-End Farm Business Analysis is April 15, 1972

We need your help. We have a top-notch year-end analysis program developed, but its success hinges on your participation. For maximum value to your farmers and for the educational program, we need some extra effort at this time to get the 7363's in. Hoping you can given it that extra punch.

Input forms (7363) on the Year-End Ohio Farm Business Analysis will be accepted until April 15, 1972. Forms submitted after April 15, will not be included in the summaries and might not be processed.

There will be summaries this year! We give you our personal guarantee. Summaries can be provided on the state, area, or county basis. To obtain summaries on an area or county, sufficient 7363's will have to be submitted to make the analysis meaningful. We will start making group summaries by April 25; they will be available, as printed by the computer by the first of June; publications containing summaries should be available sometime this summer.

To date, we have processed over two hundred 7363's. All reports have been very favorable. Approximately half of these have been from vocational agricultural teachers. Many recipients of the processed results are acclaiming this year as "The Best Ever." In all but a few isolated cases, we are achieving less than two week in-house turn around--i.e., from the time we receive the 7363's until the results are mailed back.

These year-end analyses are useful to extension personnel as well as farmers. If 7363's have been properly filled out, the processed results are very informative as to the strengths and weaknesses of a farm business. Having an analysis available should greatly enhance your ability to discharge your duties to your farmer clientele.

We do need your help in making the Year-End Farm Business Analysis a success. Sufficient 7363's are needed to make state, area, and county summaries meaningful. The analyses this year are excellent and the processing is proceeding in an efficient manner. Give us a hand in making this "The Best Ever."

RDT/bc

cc: D. Boyne
J. Moore
R. Duvick
J. Oren
O. Musgrave
G. Gist
A. Ezzel

THE OHIO STATE UNIVERSITY
COLUMBUS, OHIO 43210

COLLEGE OF AGRICULTURE AND HOME ECONOMICS
Resident Instruction—Research—Extension

DEPARTMENT OF AGRICULTURAL ECONOMICS
AND RURAL SOCIOLOGY
AGRICULTURAL ADMINISTRATION BUILDING
2120 FYFFE ROAD
PHONE 422-7911

M E M O

TO: County Agents, Area Supervisors, and Area Farm Management Agents

FROM: Reed Taylor and Bill Bastian DATE: March 29, 1972

SUBJECT: Progress Report on Ohio Year-End Farm Business Analysis

To date, March 29, 1972, we have received a total of 348 7363 input forms for 1971. Vocational agricultural teachers have submitted 134 and extension personnel have submitted 214. The enclosed map shows the number submitted by county.

The April 15 cut-off date is now only two short weeks away. We want to encourage you to submit as many 7363's during the last two weeks as possible. The computer analysis is progressing very well. We have not had any serious complaints from the field. In fact, almost all reports have been complimentary. Several field personnel have declared this year's analysis "The Best Ever."

Extension personnel who have turned in 7363's have reported almost no opposition to the $12.00 charge for the total farm analysis, or the $15.00 charge where enterprise analysis is included. In fact, many farmers seem to be in favor of the charge. They feel that "for nothing you get nothing; for something you get something." We personally believe a charge is good psychology. Most of the 7363's being submitted this year seem to be well thought out.

Enterprise analyses this year are especially useful to farmers. If he submits a 7363 properly filled out for enterprise analysis, he will obtain a report that treats each enterprise as a separate business. Figures for each enterprise are reported for the enterprise as a whole and per unit. As an example, he can quickly see what the costs of fertilizer were per acre of corn produced. After state and area summaries are made, the individual farmer can quickly compare his performance for any enterprise against those of his fellow producers.

In order to produce state, area, and county summaries, we need sufficient input data. We can only obtain that data by your submitting 7363's. Your help in this effort will be appreciated by your extension clientele.

SEND IN THE 7363'S NOW!

RDT/bc

Enclosure

cc: D. Boyne
J. Moore
R. Duvick
J. Oren
O. Musgrave
G. Gist
A. Ezzel

7363 FORMS FOR 1971

Total for the State:

Vocational Agriculture	142
Extension Service	320
Total	462

V = Number of 7363 forms received through Vocational Agriculture

E = Number of 7363 forms received through Extension Service

T = Total number of 7363 forms received

THE OHIO STATE UNIVERSITY

M E M O

TO: County Agents, Area Supervisors, and Area Farm Management Agents

FROM: Reed Taylor and Bill Bastian DATE: April 7, 1972

SUBJECT: Last call for 7363's on the Ohio Year-End Farm Business Analysis.

To date, April 7, 1972, we have received a total of 385 7363 input forms for 1971. Vocational agricultural teachers have submitted 138 and extension personnel have submitted 247. The enclosed map shows the number submitted by county.

April 15 is one week away. Any last minute effort will be appreciated.

Summaries on the 1971 data will be presented in two general categories: Total Farm and Enterprises. There will probably be between 15 and 20 short concise summaries. Summaries anticipated are as follows:

Total Farms	Enterprises	
All Farms	Corn	Milk
Dairy	Soybeans	Swine
Swine	Oats	Feeder Cattle
Beef	Wheat	Beef Cows
	Alfalfa	Sheep
	Corn Silage	Poultry
	Dairy	

Summaries will consist of one to three pages of explanation and a presentation of data. The data will be presented in the following manner:

Item	Upper 10% Of Farms	Upper 25% Of Farms	Middle 50% Of Farms	Lower 25% Of Farms	Your Farm

Remember, April 15 is the cut-off date for submitting 7363 forms.

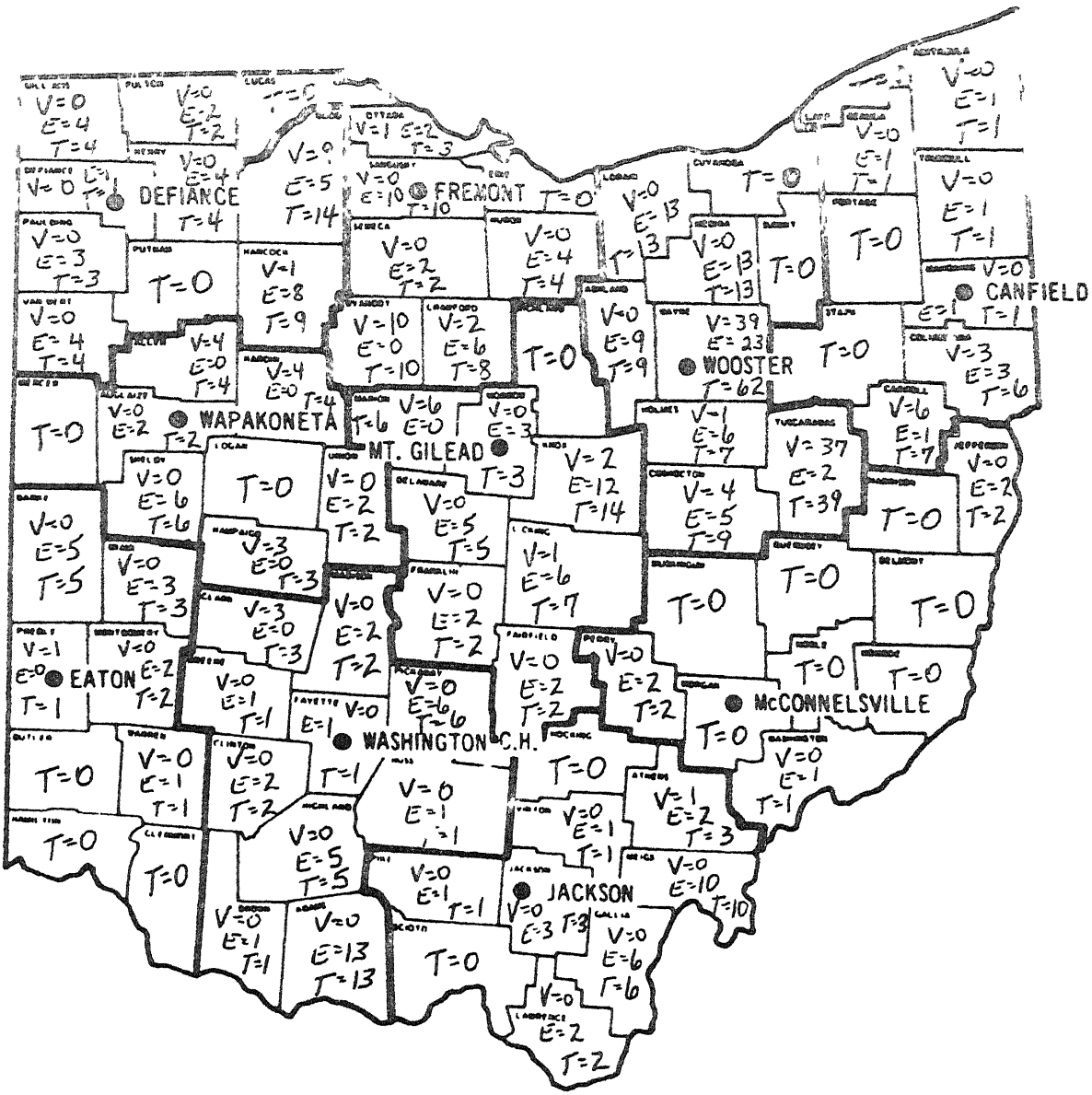
RDT/bc

cc: D. Boyne
J. Moore
R. Duvick
J. Oren
O. Musgrave
G. Gist
A. Ezzel

7363 FORMS FOR 1971 RECEIVED AS OF NOON, APRIL 7, 1972

Total for the State:

Vocational Agriculture	138
Extension Service	247
Total	385



V = Number of 7363 forms received through Vocational Agriculture

E = Number of 7363 forms received through Extension Service

T = Total number of 7363 forms received

MEMORANDUM

TO: David Boyne
John Moore
Dick Davies
Area Agents
John Starling
Joe Smith
Ron Childers

FROM: Reed Taylor & Bill Dascian DATE: September 8, 1972

SUBJECT: Farm Records

The farm records meeting scheduled for Friday, September 22, will be held in Room 253, Agriculture Administration Building beginning at 9:00 A.M. Please try to attend and bring your suggestions for next year's farm records program.

The summaries for 1971 are now in various stages of completion. The dairy summary is complete and copies should be available by September 15. The swine summary is being typed. Copies should be available by the September 22 meeting. Beef and crop summaries should be available by mid-October.

MEMORANDUM

TO: David H. Boyne
John Starling

Farm Management Area Agents
Vo. Ag. Teachers

FROM: Reed D. Taylor and Bill Bastian

DATE: September 27, 1972

SUBJECT: Notes from September 22, 1972 meeting on Year End Farm Business Analysis for 1973.

Several changes and suggestions were made for the Year End Farm Business Analysis program at the September 22 meeting. The changes and several suggestions are listed below.

1. All farm analyses for 1973 will cost $15.00 and will include the enterprise analysis section.
2. Several changes will be made to the 7363 form along with appropriate changes in the instruction booklet for filling out the 7363 form. These changes will include:
   a. Changes in receipts and expense columns on page 1 to more closely reflect the Ohio Commercial Farm Account Book.
   b. Add business type to page 1 (i.e., sole proprietor, partnership, corporation, etc.)
   c. Change operator age to number of operators.
   d. Omit column 4 from page 1.
   e. On page 2, add $ sign beside pasture value per acre.
   f. Add to labor section on page 3, Dairy Bull, Turkeys - per 1,000 lbs. sold and Broilers - per 1,000 lbs. sold.
   g. Reverse columns and rows on page 3.
   h. On expense section on page 3, omit purchased feed, combine "telephone" and "electricity" into "utilities" and add "drying and storage".
   i. Add code numbers for several more enterprises.
3. Several standard ways of filling out the 7363 form were voted on. These include:
   a. Enter broiler chick purchases as feeder livestock and layer chick purchases as depreciation.
   b. For corporations, enter at least one operator under family labor section. If more than one operator, enter these under family labor section. Be sure to deduct these from hired labor expense.
   c. For child labor entered as hired labor expense, enter number of hours as man-equivalent hours rather than number of hours actually worked.
   d. The term value should be interpreted as current agriculture value rather than purchased value or some other value.

4. Several enterprises not listed on the 7363 can be run. These include:
   a. Obtain an enterprise analysis on something other than a per acre basis by entering the other category figure in "Number of Acres" column, page 2, and completing the labor sections on pages 2 and 4 with standard figures (or more accurate labor requirements if available) except for the items not on a per acre basis.
   b. Obtain poultry analyses on a per hen and per 100 eggs basis by running the layer enterprise as a dairy summary. Enter Number of hens in place of Number of cows, 3.50% for butterfat percentage, and Number of eggs under Total pounds of milk sold. Total value of beginning inventory plus purchases must equal total value of sales plus ending inventory. Decrease in value of hens can be entered as depreciation expense. No entry on the 7363 can exceed seven characters (i.e., Number of eggs sold may not exceed 9,999,999). Analysis can be obtained on a per 10 dozen basis by dividing number of eggs sold by 12 and then multiplying by 10.
   c. Turkey or broiler enterprise on a per cwt gained basis may be obtained by running the enterprise as a beef breeding enterprise. (Do not exceed seven characters on any one entry.)

*** Please include a note with any enterprise entered in a nonstandard manner so that it is not included in the state summary.

Cooperative Extension Service

AGRICULTURE/HOME ECONOMICS/NATURAL RESOURCES

December 21, 1972

[illegible] Area Extension Agents, Farm Management
[illegible] Area Extension Agents, Dairy Industry
Area Extension Agents, Animal Industry

Dear Co-Workers:

We need you help to improve Farm Business Analysis Summaries. With the exception of dairy, the number of records suitable to include in summaries for 1971 was small. We particularly need more beef cow & calf, sheep, and poultry operations. No summary could be made on these types of farms because of small numbers. We will provide additional materials and assistance to you if needed. Following is the number of records that were complete enough to make farm summaries: 200 dairy, 12 owner-operator crops, 19 tenant crops, 12 swine, and 14 beef-feeding farms.

Enclosed are copies of the revised data collection forms for the Farm Business Analysis Program, updated instructions for completion of these forms, and an information pamphlet about the Farm Business Analysis. A teaching aid packet for demonstrating the Farm Business Analysis is available upon request.

Please notify Bill Bastian or Reed Taylor for additional materials or assistance on the Farm Business Analysis Program: Bill Bastian, Department of Agricultural Economics, 2120 Fyffe Road, Columbus, Ohio 43210 Phone: 614-422-6021 or Dr. Reed Taylor, Department of Agricultural Economics, 2120 Fyffe Road, Columbus, Ohio 43210 Phone: 614-422-2821.

The Farm Business Analysis is a sound and proven program. You will get a lot of mileage for the effort you put in it.

Sincerely,

Richard D. Dewick

Richard D. Dewick
Extension Economist
Farm Management

John E. Moore

John E. Moore
Extension Economist
Farm Management

Enclosures

cc: Reed Taylor
Bill Bastian

JEM/mb

MEMORANDUM

TO: Roy M. Kottman
Austin B. Ezzell
David H. Boyne

Orlo L. Musgrave
Austin E. Showman
College of Agriculture
Department Chairmen

FROM: Reed D. Taylor
John W. Bastian

DATE: January 16, 1973

SUBJECT: 1971 Farm Record Analysis Report Summaries

For your information, a copy of the 1971 Farm Business Analysis Report Summaries is attached. Four reports are bound together as follows:

Dairy Summary
Swine Summary
Crop Summary
Beef Summary

Cooperative Extension Service

AGRICULTURE/HOME ECONOMICS/NATURAL RESOURCES

January 24, 1973

To: County Agents, Agriculture

From: Bill Bastian

Re: Throw Away Old Farm Record Analysis Forms

Please note that farm record analysis data collection forms (Form 7363) have been up-dated for the coming year. Please throw away all old forms. The new forms may be distinguished from old ones easily. A new statement added to the top portion of the cover page reads, "all educational programs... are available to all...without regard to race, color, or national origin." Page one now has a check list in the right hand column.

Farm records submitted on old forms cannot be processed.

Sincerely,

John E. Moore

John E. Moore
Extension Economist
Farm Management